26-50-16

00134465

THE
ASIATIC SOCIETY OF BOMBAY
Town Hall, Bombay.

Digitized with financial assistance from

Government of Maharashtra

on 01 February, 2020

00134465

EAST INDIA (PROGRESS AND CONDITION).

Presented by
The Secretary of State
for India

# STATEMENT

EXHIBITING THE

# MORAL AND MATERIAL PROGRESS AND CONDITION

# INDIA

## DURING THE YEAR 1912-13.

134465

FORTY-NINTH NUMBER.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

(*Presented pursuant to Act* 21 & 22 *Vict. c.* 106, *s.* 53.)

India Office,
22 *June* 1914.

T. W. HOLDERNESS,
Under Secretary of State for India.

26/57/1

*Ordered, by* The House of Commons, *to be Printed*,
22 *June* 1914.

Cx-c-11

LONDON:
PRINTED UNDER THE AUTHORITY OF HIS MAJESTY'S STATIONERY OFFICE
BY EYRE AND SPOTTISWOODE, LTD., EAST HARDING STREET, E.C.,
PRINTERS TO THE KING'S MOST EXCELLENT MAJESTY.

To be purchased, either directly or through any Bookseller, from
WYMAN AND SONS, LTD., 29, BREAMS BUILDINGS, FETTER LANE, E.C., and
28, ABINGDON STREET, S.W., and 54, ST. MARY STREET, CARDIFF; or
H.M. STATIONERY OFFICE (SCOTTISH BRANCH), 23, FORTH STREET, EDINBURGH; or
E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN;
or from the Agencies in the British Colonies and Dependencies,
the United States of America, the Continent of Europe and Abroad of
T. FISHER UNWIN, LONDON, W.C.

1914.

288. *Price* 1*s.* 3*d.*

# PREFACE.

THE Statement exhibiting the Moral and Material Progress and Condition of India is presented to Parliament in each year in accordance with the requirements of the 53rd section of the Act for the better Government of India (21 and 22 Vict., cap. 106), which provides as follows:—"The Secretary of State in Council shall, within the first fourteen days during which Parliament may be sitting next after the first day of May in every year, lay before both Houses of Parliament an Account for the financial year preceding that last completed of the Annual Produce of the Revenues of India . . . and such Account shall be accompanied by a Statement prepared from detailed reports from each Presidency and District in India in such form as shall best exhibit the Moral and Material Progress and Condition of India in each such Presidency."

The Statement is prepared in the India Office from a large number of annual reports received from India. Many of these reports are compiled from information furnished by District and Political Officers, and are submitted to the Governments of the respective Provinces and to the Government of India for consideration and review before transmission to England; and some of them, which deal with the operations of important departments and require the careful consideration of the authorities in India, are not received at the India Office till about a year after the date of the period to which they refer. It is, therefore, seldom possible to present the Statement to Parliament earlier than the date mentioned in the Statute, i.e., about thirteen and a half months after the close of the official year.

# TABLE OF CONTENTS.


| | PAGE |
|---|---|
| I. Administration and Legislation: | 1–5 |
| Administration | 1 |
| Legislation | 2 |
| II. Justice and Police: | 6–15 |
| Civil Justice | 6 |
| Crime and Police | 8 |
| Criminal Justice | 11 |
| Jails: | 14 |
| III. Finance: | 16–23 |
| Form of Accounts | 16 |
| Gross Revenue and Expenditure | 16 |
| Net " " " | 17 |
| Provincial Finance | 18 |
| Home Charges | 19 |
| Capital Outlay on Public Works | 19 |
| Debt | 20 |
| Currency and Exchange | 21 |
| Banks | 23 |
| IV. Land Revenue: | 24–31 |
| Land Tenures | 24 |
| Tenant Right and Land Legislation | 25 |
| Revenue Surveys and Settlements and Land Records | 26 |
| Revenue Assessments and Incidence | 27 |
| Collection of the Revenue | 28 |
| Wards' and other Estates | 31 |
| V. Revenue from Taxation and Opium: | 32–44 |
| Salt | 32 |
| Excise | 35 |
| Provincial Rates | 40 |
| Stamps | 40 |
| Customs | 41 |
| Income Tax | 42 |
| Registration | 42 |
| Opium | 43 |
| VI. Agriculture: | 45–54 |
| Season and Crop Reports | 45 |
| Agricultural Produce | 46 |
| Co-operative Credit Societies | 51 |
| VII. Forests: | 55 |
| VIII. Mineral Production and Mining: | 59–61 |
| Mineral Production | 59 |
| Mining Concessions | 60 |
| Inspection of Mines | 61 |
| Mining Education, &c. | 61 |
| IX. Manufactures: | 62–66 |
| Introductory | 62 |
| Government and Industrial Development | 62 |
| Large Industries | 62 |
| Factory Legislation | 65 |
| " Inspection | 65 |
| Patents and Designs | 66 |
| X. Trade: | 67–71 |
| Foreign Seaborne Trade | 67 |
| Land Frontier Trade | 70 |
| Coasting Trade | 70 |
| Shipping | 70 |
| Freights | 70 |
| Working of the Merchandise Marks Act | 71 |
| Joint Stock Companies | 71 |
| XI. Public Works: | 72–82 |
| General | 72 |
| Railways | 73 |
| Irrigation | 76 |
| Buildings and Roads (Civil) | 81 |
| XII. Post Office and Telegraphs: | 83–87 |
| Post Office | 83 |
| Telegraphs | 85 |
| Indo-European Telegraph Department | 86 |
| XIII. Scientific Departments: | 88–95 |
| General | 88 |
| Board of Scientific Advice | 88 |
| Survey of India | 88 |
| Other Surveys | 89 |
| Meteorological Department | 89 |
| Agricultural Departments | 90 |
| Civil Veterinary Department | 93 |
| Archæological Department | 94 |
| Medical Research Institutes | 95 |
| XIV. Education, Literature, and the Press: | 96–107 |
| Education | 96 |
| Literature and the Press | 104 |
| XV. Local Self-Government: | 108–115 |
| General | 108 |
| Municipalities | 108 |
| District and Local Boards | 112 |
| Port Trusts | 114 |
| XVI. Condition of the People: | 116–126 |
| Vital Statistics | 116 |
| Plague | 118 |
| Sanitation | 119 |
| Hospitals, Dispensaries, &c. | 121 |
| Emigration and Migration | 122 |
| Prices | 123 |
| Wages | 124 |
| Famine or Scarcity | 125 |
| General Remarks | 125 |
| XVII. Army and Marine: | 127–128 |
| Army | 127 |
| Military Works | 128 |
| Marine | 128 |
| XVIII. Frontiers and Native States: | 129–141 |
| Frontier States | 129 |
| Native States | 132 |
| Bibliography of Official Reports | 142 |


E 0.58 1250 7/14 E & S

A 2

## Indian Currency and Weights and Measures.

*Currency.*—The silver rupee (containing 165 grains of fine silver and 15 grains of alloy and weighing in all 180 grains troy or 1 tola) was the sole standard of value until the 26th June 1893, when the Indian mints were closed to the unrestricted coinage of silver into rupees and it was notified that gold coin and bullion would be received at the mints in exchange for Government rupees at the rate of 7·53344 grains of fine gold for one rupee, being equivalent to a rate of exchange of 15 rupees per £1. In 1899 British gold coins were made legal tender side by side with rupees at that rate.

The Indian denominations with their British equivalents are—

| | |
|---|---|
| Pie | = $\frac{1}{12}$ penny. |
| Pice (3 pies) | = 1 farthing. |
| Anna (12 pies) | = 1 penny. |
| Rupee (16 annas) | = 1*s.* 4*d.* |

A lakh (lac) is 100,000 rupees and a crore is 100 lakhs.

*Weights and Measures.*—The weights adopted in Government transactions and by the railway companies are as follows :—

| | | |
|---|---|---|
| 1 tola | = 180 grains | = 11·66 grams. |
| 1 chittak (5 tolas) | = 900 „ | = 58·32 „ |
| 1 ser (16 chittaks) | = 2½ troy lb. (or 2$\frac{2}{5}\frac{2}{5}$ lb. avoir.) | = 933·10 „ |
| 1 maund (40 sers) | = 100 „ „ (or 82$\frac{2}{7}$ „ „ ) | = 37·32 kgms. |

# CHAPTER I.

## ADMINISTRATION AND LEGISLATION.

### Administration.

The following were the holders of the most important appointments connected with the administration of India at the end of the year under review :—

I. In London.

*Secretary of State.*—The Most Hon. the Marquess of Crewe, K.G.

*Permanent Under Secretary of State.*—Sir T. W. Holderness, K.C.S.I.

*Parliamentary Under Secretary of State.*—The Hon. E. S. Montagu, M.P.

*Members of the Council of India.*—Lieut.-Col. Sir D. W. K. Barr, K.C.S.I.; Sir H. S. Barnes, K.C.S.I., K.C.V.O.; Sir F. O. Schuster, Bart.; Sir T. Morison, K.C.I.E.; General Sir C. C. Egerton, G.C.B., D.S.O.; Sir J. D. La Touche, K.C.S.I.; Sir Krishna Gobinda Gupta, K.C.S.I.; Sir J. Thomson, K.C.S.I.; Sir S. W. Edgerley, K.C.V.O., C.I.E.; Sir T. Raleigh, K.C.S.I.; Mirza Ali Abbas Baig, C.S.I.; L. Currie.

II. In India.

*Governor General of India.*—The Right Hon. Baron Hardinge of Penshurst, G.C.B., G.M.S.I., G.C.M.G., G.M.I.E., G.C.V.O., I.S.O.

*Members of Council.*—General Sir O'Moore Creagh, V.C., G.C.B., G.C.S.I. (extraordinary), Commander-in-Chief; Sir G. Fleetwood Wilson, G.C.I.E., K.C.B., K.C.M.G.; Sir R. W. Carlyle, K.C.S.I., C.I.E.; Sir S. H. Butler, K.C.S.I., C.I.E.; Sir Syed Ali Imam, K.C.S.I.; W. H. Clark, C.S.I., C.M.G.; Sir R. H. Craddock, K.C.S.I.

*Governor of Madras.*—The Right Hon. Baron Pentland, P.C., G.C.I.E.

*Members of Council.*—Sir J. N. Atkinson, K.C.S.I.; Pazhamanheri Sundaram Sivaswami Aiyar, C.S.I., C.I.E.; Sir H. A. Stuart, K.C.V.O., C.S.I.

*Governor of Bombay.*—The Right Hon. Baron Sydenham, G.C.S.I., G.C.M.G., G.C.I.E.

*Members of Council.*—R. A. Lamb, C.S.I., C.I.E.; C. H. A. Hill, C.S.I., C.I.E.; Prabhashankar Pattani, Diwan of Bhavnagar, C.I.E. (temporary).

*Governor of Bengal.*—The Right Hon. Baron Carmichael of Skirling, G.C.I.E., K.C.M.G.

*Members of Council of Governor of Bengal.*—Sir F. W. Duke, K.C.I.E., C.S.I.; P. C. Lyon, C.S.I.; Nawab Saiyid Shamsul Huda.

*Lieutenant Governors.*—United Provinces of Agra and Oudh, Sir J. S. Meston, K.C.S.I.; Punjab, Sir M. F. O'Dwyer, K.C.S.I.; Burma, Sir H. Adamson, Kt. K.C.S.I.; Bihar and Orissa, Sir C. S. Bayley, K.C.S.I., I.S.O.

*Members of Council of Lieutenant Governor of Bihar and Orissa.*—E. A. Gait, C.S.I., C.I.E.; E. V. Levinge, C.S.I.; Maharaja Bahadur Sir Rameswar Singh, K.C.I.E. of Darbhanga.

*Chief Commissioners.*—Central Provinces, Sir B. Robertson, K.C.S.I., C.I.E.; North-West Frontier Province, Lieut.-Col. Sir G. O. Roos-Keppel, K.C.I.E.; Assam, Sir Archdale Earle, K.C.I.E.

---

*Changes in Provincial Boundaries and transfer of Capital to Delhi.*—The territorial changes involved in the constitution of the new provinces of Bengal, Bihar and Orissa and Assam came into effect on the 1st April 1912. They are described in papers already laid before Parliament (Cd. 5979 of 1911, and 6189 of 1912). On the same date Bengal was raised to a Governorship under Baron Carmichael of Skirling, who was previously Governor of Madras, and the seat of the Government of India was transferred from Calcutta to Delhi. The province of Delhi was constituted later, with effect from the 1st October 1912. It includes the city of Delhi and forms a small

*enclave* in the Punjab with an area of 557 square miles. It is administered by a Chief Commissioner.

*Creation of an Executive Council for the Lieutenant-Governor of Bihar and Orissa.*—In exercise of the powers vested in him by Section 3 (1) of the Indian Councils Act, 1909 (9 Edw. 7. c. 4), the Governor-General in Council created an Executive Council in Bihar and Orissa by proclamation dated 1st August 1912. The number of members was fixed at three or four, two of whom must be persons who have been in the service of the Crown in India for at least 12 years. The Lieutenant-Governor may overrule the Council in any case which, in his judgment, is of high importance essentially affecting the public interest and welfare.

*Indian Students.*—The Bureau of Information and the Advisory Committee which were established in 1909 for the benefit of Indian students in England remained in full operation during the year under review.

*Public Services Commission.*—The Royal Commission on the Public Services in India was opened at Madras by Lord Islington in January 1913. Evidence was taken at Delhi and the various provincial capitals until April when the Commission returned to England.

The scope of the Commission's inquiry during this visit to India was limited to questions connected with the Civil Service of India and the Provincial Civil Services.

## Legislation.

### I. In England.

*The Government of India Act*, 1912 (*2 & 3 Geo. 5. c. 6*), made such amendments in the law relating to the government of India as were consequential on the appointment of a separate Governor of the Presidency of Fort William in Bengal, and other administrative changes in the local government of India. It declared the powers of the Governor and Governor in Council of Bengal, and applied certain provisions of the Indian Councils Act, 1909 (9 Edw. 7. c. 4), to Bihar and Orissa in like manner as they applied to the Bengal division of the Presidency of Fort William. The Act further made lawful the creation of legislative councils for territories under Chief Commissioners.

### II. In India.

Between the 1st April 1912 and the 31st March 1913 the following enactments received the assent of the Governor-General of India:—Fourteen Acts passed by the Council of the Governor-General for making laws and regulations, thirteen by that of Bombay, one by that of Bengal, eight by that of the Punjab, four by that of the United Provinces of Agra and Oudh, and three by that of Burma. Two regulations were passed by the Governor-General in Council on the recommendation of the Local Governments of the provinces affected by them in accordance with the provisions of 33 Vict. c. 33, and one Ordinance was made and promulgated by the Governor-General under the powers conferred on him by section 23 of the Indian Councils Act, 1861.

The following are the measures referred to:—

## Acts of the Governor-General's Council.

*The Wild Birds and Animals Protection Act* (*No. VIII. of* 1912) had for its object the protection of those wild birds and animals which are threatened with extermination. It enables Local Governments to declare a close time (which may extend throughout the whole year) for any kind of wild bird or animal. During such close time, subject to certain exceptions made in the interests of scientific research, and of *bonâ fide* defence of person or property, the killing or capturing, buying or selling, or possession of such wild bird or animal is a punishable offence. For the first offence a fine not exceeding Rs. 50 may be imposed; for subsequent offences the fine may extend to Rs. 100, and imprisonment for a term which may extend to one month may be awarded, either with or without fine.

*The Presidency Small Cause Courts* (*Amendment*) *Act* (*No. IX. of* 1912) extended the limit of the jurisdiction of the Presidency Small Cause Courts in respect of immoveable property to property of an annual value not exceeding Rs. 2,000. The former limit was Rs. 1,000, and the change was made in view of the marked increase in the annual value of house property in Presidency towns in recent years.

(Governor-General's Council.)

*The Indian Divorce (Amendment) Act (No. X. of* 1912) extended the application of the Divorce Act of 1869 to Christian converts, provided that both parties were Christians at the time of the occurrence of the facts on which the claim to relief is founded.

*The Local Authorities (Emergency) Loans (Amendment) Act (No. XI. of* 1912) transferred from the Governor-General in Council to local Governments the power to sanction the raising by local authorities of loans to meet certain emergencies. The change was recommended by the Royal Commission on Decentralisation.

*The Motor-Vehicles International Circulation Act (No. XII. of* 1912) authorised the Governor-General in Council to make rules to give effect to the recommendations of the Automobile International Convention of 1909 for facilitating international travel by motor-car.

*The Delhi Laws Act (No. XIII. of* 1912) applied and adapted existing laws to the newly-created province of Delhi.

*The Indian Extradition (Amendment) Act (No. I. of* 1913) was passed to give explicitly to Chief Presidency Magistrates in Presidency towns the same powers that District Magistrates already possessed in the matter of the execution of warrants issued by political officers in certain cases.

*The Official Trustees Act (No. II. of* 1913).—This was a consolidating and amending Act. It does away with the old system of Official Trustees remunerated by commission, in favour of a class of officials with fixed salaries, whose liabilities are undertaken by Government in return for fees credited to Government. The Act contains provisions dealing with the qualifications of Official Trustees, their fees, the audit of their accounts by Government, &c.

The Public Trustees Act of 1906 (6 Edward VII., cap. 55) has been followed in making certain amendments of the Indian law.

*The Administrator-General's Act (No. III. of* 1913) was similar, in regard to many of its provisions, to the Official Trustees Act. For instance, all Administrators-General are made officers of Government remunerated by fixed salaries, whose liabilities are undertaken by Government and whose fees are credited to Government. The Act contains provisions for the provincial decentralization of the office of Administrator-General.

*The Sir Currimbhoy Ebrahim Baronetcy Act (No. IV. of* 1913) had for its object the settlement of the endowment of the baronetcy conferred on Sir Currimbhoy Ebrahim, of Bombay.

*The White Phosphorus Matches Prohibition Act (No. V. of* 1913) prohibited the importation into India, and the manufacture and sale in that country, of matches which contain white (or yellow) phosphorus.

*The Mussalman Wakf Validating Act (No. VI. of* 1913) declared the rights of Mussalmans to make settlements of property by way of *wakf* in favour of their families, children and descendants. *Wakf* is defined in the Act as the permanent dedication by a person professing the Mussalman faith of any property for any purpose recognised by the Mussalman law as religious, pious or charitable.

*The Indian Companies Act (No. VII. of* 1913) consolidated and amended the law relating to Trading Companies and other Associations on the lines of recent English legislation.

*The Indian Criminal Law Amendment Act (No. VIII. of* 1913) made criminal conspiracy, as defined in the Act, a substantive offence, and provided for the punishment of conspirators.

## Acts of the Provincial Legislative Councils.

**Madras.**—No Acts were passed by the Madras Legislative Council during the year under review.

**Bombay.**—*The Societies Registration Act Amendment Act (No. II. of* 1912) made it legal to transfer to Government the property of a registered society, on the dissolution of the society.

*The Bombay Race Courses Licensing Act (No. III. of* 1912) prohibited horse-racing on unlicensed race-courses, and empowered the Governor in Council to grant licenses on such conditions, and for such periods, as he might think fit.

**(Provincial Legislative Councils.)**

*The Bombay District Police Act Amendment Act* (*No. IV. of* 1912) made several amendments of detail in the Bombay District Police Act of 1890. The principal subjects dealt with are (1) the control of vehicular traffic, cinematograph exhibitions, and places of public amusement; (2) the appointment of sub-inspectors and sergeants; and (3) enquiries into the conduct of police officers.

*The Bombay Civil Courts Act Amendment Act* (*No. V. of* 1912) afforded relief to district judges by transferring certain miscellaneous proceedings to Subordinate Courts, and removed an anomaly in the conditions which previously governed the appointment of Subordinate Judges.

*The Bombay Medical Act* (*No. VI. of* 1912).—This Act followed in general outline the English Act (21 & 22 Vict. c. 90). It provides for the public registration of medical practitioners, for the creation of a medical council to control the keeping of the register; and prohibits unregistered persons from holding certain specified appointments, such as physician, surgeon, or other medical officer in hospitals and infirmaries not entirely supported by voluntary contributions, and medical officer of health. The Act places no direct restrictions upon the practice of Indian systems of medicine.

*The Bombay Smoke Nuisances Act* (*No. VII. of* 1912) dealt with the nuisance caused by the smoke of furnaces in Bombay. It is on the lines of similar legislation passed for Bengal in 1905.

*The Khoti Settlement Amendment Act* (*No. VIII. of* 1912) was passed in order to preclude the transfer of "occupancy-tenants'" rights without the consent of the *Khots* (a class of landholders in Bombay).

*The Bombay Medical Act Amendment Act* (*No. IX. of* 1912) removed a defect in the Bombay Medical Act, 1912, whereby the medical graduates of the Bombay University were not eligible for election to the Medical Council at the first election, unless they were registered under the English Medical Acts.

*The Bombay District Municipal* (*Amendment*) *Act* (*No. X. of* 1912) gave final effect, after the lapse of one year, to decisions on disputed claims to property in which the municipality is interested.

*The Bombay Land Revenue Code* (*Amendment*) *Act* (*No. XI. of* 1912) gave final effect, after the lapse of one year, to the decision of a survey officer or collector adjudicating a disputed claim to property between Government and any person, or disposing of property belonging to Government.

*The Bombay Abkari Act Amendment Act* (*No. XII. of* 1912).—This Act was based principally on the recommendations of the Indian Excise Committee which were published in 1907. It gives the Government powers to control the illicit traffic in cocaine, by providing heavier penalties than in the case of offences relating to other exciseable articles.

*The Indian Limitation Act Amendment Act* (*No. XIII. of* 1912) was passed to remove the hardships caused to a large number of poor litigants, in those districts of Bombay where the Dekkhan Agriculturists Relief Act was in force, by certain provisions of the Indian Limitation Act.

*The City of Bombay Improvement* (*Amendment*) *Act* (*No. I. of* 1913).—The more important matters dealt with in this Act were (1) housing accommodation for the poorer classes; (2) street widening; and (3) the finances of the Improvement Trust.

**Bengal.**—*The Calcutta Burial Boards* (*Amendment*) *Act* (*No. I. of* 1913) authorised the appointment of separate burial boards in Calcutta for any community other than the Christian and Muhammadan communities, who were already provided for in this respect.

**United Provinces.**—*The Oudh Laws* (*Amendment*) *Act* (*No. III. of* 1912) assimilated the law in Oudh with regard to the sale of ancestral lands in execution of decrees, to that in force in Agra.

*The United Provinces Court of Wards Act* (*No. IV. of* 1912) replaced the North-West Provinces and Oudh Court of Wards Act of 1899. It gave increased authority to the Court of Wards with a view to the further protection of the estates of landowners.

*The United Provinces Village Sanitation* (*Amendment*) *Act* (*No. V. of* 1912) made provision for improving the sanitation of village areas.

(Provincial Legislative Councils.)

*The United Provinces Prevention of Adulteration Act* (*No. VI. of* 1912) gave effect to certain recommendations of the Sanitary Conference held at Naini Tal in 1908 with a view to the improvement and protection of the supply of food and drugs. The Act is on the lines of the law in force in England, and in the towns of Calcutta and Bombay.

**The Punjab.**—*The Punjab Land Revenue Amendment Act* (*No II. of* 1912) delegated to the Local Government the power to sanction the commencement of settlement operations, in accordance with a recommendation of the Royal Commission on Decentralisation.

*The Punjab Tenancy Amendment Act* (*No. III. of* 1912).—This Act provided that where, in a suit cognizable by, and instituted in, a Civil Court, it becomes necessary to decide any matter which can only be determined by a Revenue Court, the Civil Court shall return the plaint to the Collector, who shall hear and determine the suit, or, in certain cases, send it to an Assistant Collector for decision.

*The Punjab Courts (Amendment) Act* (*No. IV. of* 1912) was passed in order to remedy an omission which had occurred in the Punjab Courts Amendment Act (No. I. of 1912).

*The Colonization of Government Lands (Punjab) Act* (*No. V. of* 1912) made better provision for the colonization and administration of Government lands in the Punjab.

*The Punjab Panchayat Act* (*No. VI. of* 1912) established a system of *panchayats* (village courts) to assist in the administration of civil justice.

*The Punjab Pre-emption Act* (*No. I. of* 1913) amended the law relating to the local custom of pre-emption in the Punjab. It was passed with the object of clearing up admitted defects and obscurities which had been brought to light in the course of litigation since the passing of the Pre-emption Act of 1905, which it replaced.

*The Redemption of Mortgages (Punjab) Act* (*No. II. of* 1913) provided a summary procedure for the redemption of certain mortgages of land in the Punjab.

*The Punjab Forest (Sale of Timber) Act* (*No. III. of* 1913) was passed in order to reduce the losses caused, both to Government and private persons, by thefts of river-borne timber. It provided for the establishment and registration of sale depôts, in such local areas as the Local Government might direct, and prohibited within those areas the sale of timber at unregistered sale depôts.

**Burma.**—*The Rangoon Port Amendment Act* (*No. III. of* 1912) was passed to give effect to certain recommendations of the Rangoon Foreshore Committée, and to facilitate the conduct of business by the Port Commissioners.

*The Rangoon Hackney Carriages Act* (*No. IV. of* 1912) provided for the regulation of hackney carriages and rickshaws in Rangoon.

*The Burma Land and Revenue Amendment Act* (*No. I. of* 1913) was mainly a measure of decentralisation, and enabled the Local Government to make rules under the (Lower) Burma Land and Revenue Act, 1876, and the Upper Burma Land and Revenue Regulation, 1889, without the previous sanction of the Government of India.

## Regulations.

*The British Baluchistan Forest (Amendment) Regulation* (*No. V. of* 1912) enabled the Local Government to exercise powers of disforestation without the previous sanction of the Government of India.

*The Coorg District Fund (Amendment) Regulation* (*No. I. of* 1913) provided for the regulation of the use of public roads and of the traffic thereon, and for the control of markets, slaughter-houses and other places in the charge of the District Board.

## Ordinance.

*The Bengal Cotton Gambling Ordinance*, 1912, prohibited the practice of cotton gambling in Bengal. It was an emergency measure promulgated pending the consideration by the Governor in Council of a law to effect the object in view. It was superseded within six months by the Bengal Public Gambling (Amendment) Act (No. IV. of 1913), passed after the close of the year under review.

# CHAPTER II.

## JUSTICE AND POLICE.

*(For further details see Statistical Abstract for British India, Tables 24 to 42.)*

## Civil Justice.

**Bengal.**—The most noticeable feature of the year's working was a considerable increase, in spite of a large decline in the institution of original suits, in the total pending file of the mufussil courts. There was a substantial increase in the outturn of appellate work by the Superior Courts, while the pending appellate file showed an increase owing to a rise in institutions. Results of 13 appeals to Privy Council were received during the year: the decisions of the High Court were affirmed in five instances and reversed in seven; one was remanded.

**Assam.**—The number of original suits instituted in the Province showed a certain increase. The number of suits pending, in spite of an increase in the number disposed of, also showed an increase. The average number of cases decided by each Munsif continued to show a satisfactory increase. In the appellate courts the disposal of cases was satisfactory, the number of cases pending at the close of the year showing a small increase upon the figures for 1911. The number pending for more than a year also slightly increased. The results of the appeals decided were more favourable to the lower courts. There was a considerable improvement in the average duration of contested cases under the ordinary procedure before all courts. On the other hand, the average duration of uncontested cases generally, and of contested cases under the Small Cause Court procedure, showed an increase.

**North Western Provinces.**—The total number of suits instituted during the year was 121,403, as compared with 117,884 in the previous year. Mortgage suits again dropped as compared with 1911; and the increase in the total number may be considered to be a return to normal conditions, the year 1911 showing a relapse after the high strain of 1910. The total number of suits before the courts fell from 152,900 to 146,132, and the number of suits decided was 125,262 as against 132,636 in 1911. The rise in institutions of suits for immoveable property rendered the work of the courts more complicated, and there were eight munsifs fewer working in 1912 than in 1911. Subordinate judges and munsifs showed a most creditable despatch. The average duration for all courts was 79 days for contested, and 38 for uncontested, suits, as compared with 88 and 46 days respectively in 1911—a satisfactory result. The number of appeals from civil courts for disposal rose from 11,136 to 12,245, and the number disposed of from 6,995 to 8,123, while there was a slight increase in the number of the pending file.

**Oudh.**—There was in 1912 a very slight increase (from 64,572 to 65,288, or about 1·1 per cent.) in the number of institutions. The cases decided after contest were 499 more than in 1911. The average duration of suits for the whole province fell from 33 to 32 days in uncontested, and from 70 to 65 in contested, suits. The total number of appeals for disposal rose by 11 per cent., while the disposals improved by 15 per cent.

**Central Provinces and Berar.**—The total number of suits instituted fell from 115,016 in 1911 to 100,080, or 13 per cent. This decrease included that of 13,331 cases in suits for money or moveables. On the other hand, the increase in suits for immoveable property was almost as widespread, and was very probably due to a generally prosperous year. As regards the number of pending files, the Central Provinces, as a whole, closed the year with a lower pending file than in any previous year since 1907. There was a slight fall in the average duration of contested and uncontested cases in the Central Provinces, while the Berar average for uncontested cases improved from 145·3 to 129·0 days, and contested cases rose from 268·1 to 269·5 days—figures considerably higher than those for the Central Provinces. The number of institutions of appeals rose generally, and the number of pending files in the appellate courts also rose.

**Punjab.**—The decline of litigation noted in 1911 was not maintained, and the number of suits instituted was the highest since 1904, with the exception of 1909; and exceeds the number for 1911 by 17,684. Nearly 50 per cent. of the suits instituted were below Rs. 50 in value. 16,538 more suits were decided than last year. The average duration of suits rose considerably. There was also a considerable increase in the number of pending files in the appellate courts; but it is hoped to clear off the heavy arrears.

**Bombay.**—The total number of civil cases decided during the year in Bombay was 296,330 as against 296,007 in 1911. The total number of suits instituted in all the Courts was 136,083 as against 130,431; in 1911 there was a decrease of 38,576. The percentage of suits for money or moveable property rose from 77·1 to 79·9. There were 193,621 suits for disposal before all the Courts, and 46,763 were left pending at the close of the year; the corresponding figures for 1911 were 203,951 and 55,387 respectively. Of the total number of suits disposed of after contest and on reference to arbitration judgment was given for plaintiff in whole or in part in 83·8 per cent., and for defendant in 16·2 per cent. of cases. The average duration of contested suits fell from 419 to 222 days, and of uncontested suits from 185 to 96. 6,969 appeals were presented during the year; 6,428 were decided, and the number of arrears at the close of the year was 6,202 as compared with 5,661 in the previous year. The average duration of appeals was 312 days as against 332 in 1911.

**Madras.**—The total number of suits instituted in Madras was again the highest yet reached, 484,662, an increase of 33,815 over the figures for 1911. The increase among suits for money or moveable property alone was 27,292. In the Presidency town one suit was instituted for every 26 persons. In the suits disposed of in 1912 the percentage of plaintiffs, who succeeded in obtaining decrees for the whole or part of the relief claimed, was 75·27. The total number of appeals preferred was somewhat less than in 1911, but 2,149 above the average for the five years 1906–10. The average duration of contested and uncontested cases generally rose. A Commissioner was appointed to inquire into the adequacy of judicial establishments throughout the Presidency, and his report has since been submitted.

**Burma.**—In both Lower and Upper Burma the number of original suits instituted rose. In Lower Burma mortgage suits fell, probably owing to the large prices realised for the paddy crop. In Upper Burma they rose by 37 per cent. There was a satisfactory disposal of cases. The record of appellate work throughout the province was satisfactory and showed a slow but sure improvement in the quality of the work performed by the courts from which appeals were preferred.

**Bihar and Orissa.**—In Bihar and Orissa there were 6,156 more suits instituted than in 1911 (176,917 in all). At the commencement of the year there were 253,019 suits for disposal, and of these 163,745 were decided. This represents a decrease in the total number, but an increase in the number of contested suits. Of the contested suits 82·5 per cent. were decided in favour of the plaintiffs. An increase in the duration of suits tried by all classes of courts was recorded. The pending file showed at the close of the year a large increase; and, in spite of a large outturn, there was an increase of the appellate arrears owing to heavier institutions.

**North-West Frontier Province.**—The total number of suits instituted was the largest yet recorded, the figures for suits for money and moveable property (20,167) being considerably in excess of the previous highest total in 1909 (18,896) and the total number representing an increase of over 4 per cent. on the number for the previous year. A very large percentage of the suits brought were of a speculative nature, nearly 32 per cent. of the contested cases being decided against the persons who brought them. The duration of original contested suits was the highest for many years, due partly to congestion in the Divisional Court, Peshawar, and in the district courts. The results of the extra attention paid by the courts to the execution side, and the consequent greater efficiency of their own decrees, were a satisfactory feature of the year's work.

**Coorg.**—In Coorg the number of suits filed (2,651) was the highest figure during the past decade. The total value of suits was 31·42 per cent. more than that of the previous year, and the average value rose from Rs. 74 to Rs. 92. The number of arrears fell from 404 in 1911 to 359; and there was no case pending in the appellate court at the close of the year.

## Crime and Police.

**Madras.**—In 1912 there was a marked increase of crime which corresponds with the fact that the prices of food-grains, very high in 1911, rose still higher. The increase of crime fell mainly under the heads of theft (+1,957), house breaking (+939) and cattle-theft (+582), the preventive work of police against criminal gangs, habitual criminals and receivers remaining ineffective. The total number of true cases of grave crime rose from 30,727 in 1911 to 34,408 in 1912, and included 647 murder cases as against 599 in 1911, the highest number yet recorded. The number of dakaities also rose considerably. There were several serious riots. Investigation was refused in 1·5 per cent. as compared with 1·1 in 1911 of the cases reported during the year, the number being 178,727. In certain districts a growing tendency on the part of the public to assist the police in bringing offenders to justice was noticed; but the quality of detection differed considerably in the different localities. The inexperience of the Sub-Inspectors continued to be a serious handicap; and the absence of local knowledge continued to be one of the greatest obstacles to success. The percentage of property lost and recovered fell from 18·8 in 1911 to 18·2 in 1912; but there was an increase in the total amount lost. Though the number of receivers in the Presidency is legion, only a very small proportion of them come under the notice of the police.

The total sanctioned strength of the police was on the last day of the year 32,764, or 399 in excess of the number on the corresponding date of the previous year. Recruiting continued to be generally difficult, owing to the demand for labour and the prevalence of high prices. The percentage in the force of illiterates was 11·8 as against 12·0; it was found necessary to enlist 305 illiterates during the year, but the enlistment of them has since been restricted. Casualties were less numerous than in 1911, and the number of resignations, though high, was smaller. The percentage of departmental punishments was generally reduced. The cost of the Department rose from £559,519 to £590,503, the chief items consisting of the grant of grain compensation and the pay and allowances of the police force.

**Bombay.**—Cognizable complaints reported during the year numbered 41,342 as against 35,721 in 1911, there being an increase in the number of all the more serious offences reported, including murder, robbery, and theft. Complaints for disposal, including those pending from previous years, totalled 47,198 as against 40,628 in 1911, and all but 2,859, in which investigation was refused, remained for investigation. At the close of the year the ratio of cases pending to cases for disposal was 12·3 as compared with 13·5 in 1911 and 12·2 in 1909. True cognizable cases totalled 28,447 during 1912 as against 24,030 in 1911. There was thus a further very considerable rise. The general increase in true crime was most marked under serious offences against person and property and minor offences against property, murders numbering 359 as against 321 in the previous year. The proportion of undetected cases to true crime disposed of in the entire Presidency including Sind was 42 in 1912, the same figure as for 1910 and 1911, in spite of the fact that 4,417 more true cases were disposed of during the year. The value of property stolen during the year in connection with cognizable crime amounted to £77,426 as against £98,456 in 1911, while the value of the property restored raised the percentage for 1912 to 34·7 from 33·9 in the previous year.

The total strength of the police force of the Presidency was, at the close of the year, at 24,124 as against 24,194 in 1911, and the total cost £454,755, an increase of £17,322, due mainly to further measures of reorganisation. The ratio of punishments to the actual strength of the force fell slightly to 13·6, while rewards increased. The percentage of literates in the force of the entire Presidency stood at 53·98 as against 53·5. Recruiting continued difficult, while there was a slight increase in the number of resignations during the year. The health of the force was scarcely satisfactory, though there were 27 fewer deaths than in 1911. The morale of the force and the quality of the work performed by it continued to show improvement.

**Bengal.**—As regards political crime 1912 saw the end of the Dacca conspiracy case, on appeal 21 out of 35 persons convicted by the Lower Court being acquitted by the High Court and the remaining 14 having their sentences reduced. There were 12 cases of political crime during the year as against 13 in 1911, and six in 1910, the Dacca district again heading the list with eight out of the 12 cases reported. In this year also a police officer who had given evidence in the Dacca conspiracy case was shot

dead. The Criminal Intelligence Bureau continued to justify its existence, and considerable progress was made in the collection and collation of materials. The number of true cases reported amounted to 49,236 as against 48,696 in 1911, including an increase of 23 cases of murder and 321 of burglary, and a decrease of 100 cases of dakaity.

In Bengal also, owing to the inadequacy of the pay offered, Police recruitment was difficult. The general health of the force was poor. Sixty-two cases of alleged serious ill-treatment or torture were reported to Government, and of 50 cases before the criminal courts 7 ended in acquittal, 7 were compromised, 22 dismissed, and conviction was secured in 14, but in one of these two constables were acquitted on appeal. The actual expenditure for the financial year 1912–13 was £449,172 as against £475,423 in 1911; and the sanctioned strength of the subordinate police, excluding the Criminal Investigation Department was, on 31st December 1912, 19,142 as compared with 18,375 in the previous year.

**United Provinces.**—The year under review was in the United Provinces prosperous, with comparatively little distress among the poorer classes, and this is reflected in the returns. There was a decrease in the number of reported cognizable crimes of all classes in spite of a remarkable increase of 6,633 in public nuisances and cognizable offences under special and local laws. There was a further marked and most gratifying decrease in the proportion of cases in which investigation was refused, which from 46 per cent. in 1909 had fallen at the end of the year to 34. The year was notorious for what is known as the Agra case, in which Lieutenant Clarke and Mrs. Fulham were accused and convicted of the murder of Mrs. Clarke and Mr. Fulham. There was a satisfactory decrease in the figures for dakaity. The Sitapur murder case directed public attention forcibly to the provisions of the Criminal Procedure Code. The year was marked by a considerable activity in dealing with the problem of the criminal tribes; but it is too early yet to judge of results. As regards the police, there was an increase in the number of punishments, due rather to more rigid discipline than to any deterioration of behaviour; and it is probably true to say, in spite of statistics to the contrary, that the general standard of conduct and discipline went on improving. The number of literates in the force increased somewhat, and there was a considerable decrease, from 28 to 19, in the percentage of admissions into hospital.

**Punjab.**—During the year there was a real increase in serious crime, the total number of true cognizable cases dealt with totalling 50,831, an increase of 4,328 on the figures for 1911. Since 1903, there has been an increase of 33 per cent. in the volume of crime reported, while the percentages of convictions have steadily declined. There was an increase of 8·4 per cent. in murder cases, the total number being 516; in 1912 there were 115 dakaities, this number representing a steady increase since the reorganisation of 1905 and a sudden rise from 48 to 100 cases in 1911. There was an increase of 100 in the sanctioned strength of the force, counterbalanced, however, by a decrease of 953, due to the formation of the Delhi Enclave. There was a reduction in police expenditure of £2,188 to £368,527. The increase in the number of judicial and departmental punishments during the year was unsatisfactory, and is probably due partly to greater supervision and partly to the quality of the men who offered themselves for enrolment, in spite of the fact that great pains were taken to select the best recruits available. The number of educated men in the force showed an increase of 50, and of the lower ranks 32 per cent. could, at the close of the year, read and write.

**Assam.**—The number of true cases in Assam rose from 9,633 in 1911 to 10,687, serious crime increasing under every head except dakaity. For a very large proportion of this increase, the Assam Valley Division, with its immigrant population of tea-garden coolies, was responsible. There was practically no political crime.

The total sanctioned strength of the force rose during the year from 3,096 to 3,271, and the cost of the Department rose by £8,069 to £136,526. The discipline of the force left much room for improvement; and, owing to the amount of pay offered, recruitment is a continual difficulty.

**Central Provinces and Berar.**—In 1912, though there was an increase in the statistics of reported crime, there was a satisfactory falling off in the returns of heinous crime, both murders and dakaities being fewer than in 1911. The increase in the number of house-breakings reported during 1912 was probably due rather to more accurate registration than to an increase in actual crime. The detective work

of the police in this connection was, on the whole, throughout the Province unsatisfactory. A good record in respect of robberies and dakaities was shown by Berar; and this result may be attributed largely to the marked co-operation, which has been secured of recent years, of the villagers and the village officers with the police.

Special efforts were made during the year to recruit the force up to its full strength, resulting in a considerable increase in the expenditure. Stress was laid upon securing, as far as possible, local recruits; but in the southern districts it was found necessary to draw upon outsiders to an extent even greater than in former years. There was a slight improvement in the behaviour of the force and in the procedure of district superintendents in enforcing discipline. The reluctance of the district police to ask for the aid of the Criminal Investigation Department seems entirely to have disappeared, and their services were freely utilised in important cases.

**Burma.**—The report for the year 1912 for Burma is disquieting. The condition, on the one hand, of the lower ranks of the police force is unsatisfactory, the quality of the recruits deteriorating, and, on the other hand, the volume of serious crime showed a steady increase. Five hundred and thirty murders were committed in Burma during the year; and the number of dakaities rose from 104 in 1910 to 210 in 1912. The number of true cases of cognizable crime rose by 851 to 42,767 in this year. The police received much assistance from headmen and villagers in the investigation of crime and the arrest of criminals; but liberal rewards are required in order to call out such exertion. In spite of the increase in crime, the proportion of success achieved by the police during the year remained about the same. The percentage of literates to actual strength was 86; and the results of the training of recruits were generally good. The Lieutenant Governor, in view to the maintenance of police efficiency, has recommended a revision of the orders by which the promotion of head constables to the rank of Sub-Inspector is at present limited to a maximum of 15 per cent. of vacancies; and efforts to improve the general conditions of service will be made as funds permit. The Burma Military Police worthily maintained its reputation for efficiency and good conduct; some excellent service was rendered on the North-east frontier; and the relations with the people of the country were, as usual, satisfactory.

**Bihar and Orissa.**—The total number of cognizable crimes reported during the year 1912 was 59,713 cases, representing a slight decrease from the corresponding figures for 1911. Dakaity increased to nearly double the figures of 1911 (136 as against 77), but the latter figure was the lowest since 1905; while the number of true cases of murder decreased from 174 in 1911 to 157 in 1912. The percentage of police cases ending in conviction to cases decided was for the province in 1912 for all classes 89, and the percentage of cases investigated by the police to cases reported was 89. As regards the police force, the conduct generally was good and the efficiency continued to improve; charges of torture and extortion decreased; but promptness in investigation left much to be desired.

**North-West Frontier Province.**—The total number of cognizable cases of crime showed a decrease of 164 on the figures for 1911; but there was a general increase in the number of serious offences which actually occurred during the year; murders advanced from 260 to 328, and theft from 959 to 1,198; dakaities, however, decreased. The police and militias of the province obtained considerable success against kidnapping gangs in spite of difficulties and the ease with which any unarmed villager in a frontier village can be carried across the border. The outlaws also who succeeded in carrying off villagers failed in the large majority of their enterprises to realise any profit. The Criminal Investigation Department combated and defeated the illicit trade in arms and the operations of the professional rifle thief. The relations of the Department with the District Police remained most cordial. The detective work of the Department was again most disappointing and seems to call for a radical alteration in the training in methods, although the higher ranks of the force are more intelligent and of a better social status than their predecessors. The force was kept up to strength in spite of 273 resignations; and the fact that 80 per cent. of the men leave the force within three or four years is responsible for a great waste of time and trouble in training. The standard of education continued satisfactory, and the behaviour of the force as judged by the number of punishments, judicial and departmental, was creditable.

**Coorg.**—The number of cognizable offences reported (556) was 88 in excess of the number for the previous year; but under serious and minor offences against property there was a considerable decrease. The percentage of convictions obtained in cognizable cases investigated by the police was 84·52 against 79·68 in 1911. The percentage of property stolen to property recovered went up from 28·99 in 1911 to 70·61 in this year. The conduct of the force, which was slightly smaller than in 1911, was on the whole satisfactory; and there were only five illiterates in Canarese as compared with six in 1911.

## Criminal Justice.

**Bombay.**—The total number of criminal cases disposed of during 1912 was 167,245 as compared with 161,432 during 1911, and the total number of offences reported was 172,103, an increase of 8,648. The number of cases returned as true was 158,757, or 92·2 per cent. Cases under the Indian Penal Code related chiefly to offences of hurt, criminal force and assault, and theft; under this last there was an increase of 1,508 cases, while under hurt there was a decrease of 2,740 cases. The bulk of the increase fell under the head of special and local laws. There were 735 cases affecting human life of which 291 were murder cases. Of the 251,118 persons brought to trial 44·9 per cent. were acquitted or discharged, and 50·4 per cent. convicted, as compared with 47·3 and 48·2 per cent. respectively in the previous year; 4·3 per cent. remained under trial, and ·4 per cent. died, escaped, or were transferred. The number of original regular cases disposed of was 159,039 as against 154,232 in 1911. 67 persons were sentenced to death as compared with 48, while 183 as against 209 were condemned to transportation. In 44·6 per cent. of the appeals, the appeals were rejected and in 17·4 per cent. the sentences were reversed.

**Madras.**—The total number of original cases instituted in criminal courts in 1912 was 358,090, or 18,156 more than in 1911; the total number of appeals preferred was 9,521, or 571 more than in 1911, and 9 less than the average for the past quinquennium. The increase affected most of the courts. In the Presidency Magistrates' Courts, the total number of cases instituted was 61,910; only 71 cases were pending at the end of the year, and only 5 persons in custody. There were 6 fewer cases before the High Court Sessions, and all, 53 in number, were disposed of during the year. In the High Court the Government appealed against the acquittal of 129 persons, the quinquennial average being 55. The percentage of successful appellants was 46·93, as against 17 in the Sessions Courts and 34 in the Magistrates' Courts. Death sentences on 83 persons were referred for confirmation; of these, 35 were confirmed, 35 reduced, 12 reversed, and one boy sentenced was sent to a reformatory school.

**Bengal.**—335,069 criminal offences were reported in Bengal during the year, an increase of 43,978 on the figures of 1911. Of this increase the majority of cases were under special and local laws. Compared with 1911, when 269,372 cases were found to be true and 229,832 were brought to trial, the numbers found to be true and brought to trial increased respectively by 39,644 and 40,622. In the High Court 527 appeals against sentences of courts of session were decided, and of these 427 were upheld and 31 only reversed. During the year there was a general increase, as compared with 1911, in all classes of criminal work disposed of by the lower courts; and appellate and revisional work perceptibly increased. No Special Bench under Act XIV. of 1908 was constituted during the year; but a Special Criminal Bench of three judges heard an appeal, pending from the previous year, against the order of the Additional Sessions Judge of Dacca which convicted 35 persons of conspiracy to commit certain offences against the State. The High Court set aside the conviction and sentence of 21 persons, and modified the sentences of the remainder.

**Assam.**—There was an increase in Assam of offences reported to the criminal courts over the figures for 1911 (35,903) of 3,191 cases; and of these 30,394 were under the Penal Code, all the districts reporting an increase. A smaller percentage of complaints rejected or cases struck off as false was obtained. In cases under the Indian Penal Code, 37·1 per cent. of those tried in the Magistrates' Courts, as compared with 41·7 in 1911, were convicted. In the High Court, 10 appeals were pending, 95 appeals

(Criminal Justice.)

preferred during the year, and 99 disposed of, leaving 6 pending at the close. The appeal of the local Government against an acquittal was dismissed. As regards reference under paragraph 374, Code of Criminal Procedure, cases involving eight persons were referred to the High Court; seven were decided, and sentence was confirmed on all the seven persons whose cases were involved. Of 164 cases of application for revision made to the High Court disposed of, the orders of the lower courts were affirmed in 113, and reversed in 29, cases.

**Punjab.**—In the Punjab, as noted above, there was an increase in all the more serious classes of crime, which was accompanied by a proved inadequacy of the criminal administration to cope with it. In respect of both certainty and adequacy of punishment the criminal administration remained far from satisfactory. During 1912 only 72,744 persons were convicted out of 301,425 brought before the courts, and of these 5,336 were acquitted on appeal, making a percentage of convicted persons of about 22. The number of criminal appeals and revisions pending in the Chief Court at the close of the year was higher than for some years past; and the delay in the disposal of appeals by Government steadily increased. The total number of murders during the year was 515, the highest figure during the decade; the number of murder references dealt with was 133; and 81 capital sentences, a higher figure than for the last two years, were confirmed. As regards trials under the Frontier Crimes Regulation, the *jirga* system was reported to be popular and to be working very satisfactorily in the three districts to which it applied.

**North-West Frontier Province.**—In all districts there was a further increase in crime returned as true; and after allowing for all increase that may be due to such causes as a stricter application of the law, it has to be admitted that the volume of genuine crime continued to advance. On the one hand, the real criminal appears to have a much better chance of escaping punishment in the courts than he should have, and, on the other, the public in general more and more use the Lower Courts for their own ends and abuse the procedure prescribed for the punishment of crime. The suppression of evidence and the giving of false evidence are the responsible agents for the situation. While in 1912 the number of murders was the highest on record, in the same year the number of cases in which the death sentence was confirmed was, with the exception of 1908, the lowest. In criminal trials the percentage of discharges and acquittals rose from 55 to 60; and in the district of Dera Ismail Khan 88 per cent. of the persons brought to trial before 2nd or 3rd Magistrates were discharged or acquitted.

**North-Western Provinces.**—Although the figures for the total number of offences reported (109,303), and for the number of cases returned as true (79,635), and of persons under trial (145,864) were higher than for any previous year, yet serious crime was actually less prevalent than in 1911. The large increase may be ascribed to the prosperous agricultural year, resulting in increased returns under such heads as criminal force and assault, hurt, and criminal trespass. There was a most satisfactory increase of 57 per cent. over the figures for 1912 as regards the number of cases brought to trial under the Prevention of Cruelty to Animals Act. As regards appeals to the High Court, 82 per cent. of the appellants (1,712 as against 1,797 in 1911), and 74 per cent. of the applicants for revision, as against 71 per cent. in 1911 and 60 per cent. in 1910, were wholly unsuccessful. Great assistance was rendered by the Honorary Magistrates.

**Oudh.**—The offences reported and returned as true, and brought to trial, increased both under the Penal Code and the Code of Criminal Procedure, and other special and local laws. The increase was mainly in minor cases affecting the human body and in cases of mischief and trespass. The statistics show that the institution of false and vexatious cases was on the increase, and that the courts were not sufficiently alive to the necessity of employing their powers for the prevention or punishment of such practices. The percentage of sentences confirmed to the total number of sentences, appeals against which were disposed of, decreased both in the Courts of Deputy Commissioners and the Courts of Sessions. Six appeals were filed by Government from orders of acquittal against 26 persons. Five appeals involving 23 persons were disposed of, with the result that 15 persons were acquitted and 8 convicted.

**Coorg.**—The number of cases brought to trial totalled 2,266, or 375 more than in 1911, and the number of offences reported (2,489) increased by 369. Eleven persons were found guilty of heinous crime, and seven of them were convicted of murder. The sentence of death passed in one case was commuted to transportation for life. Seven appeals against convictions were heard by the Judicial Commissioner; the sentence was in six cases confirmed and reduced in one.

**Central Provinces and Berar.**—Though the total number of offences reported in the Central Provinces and Berar rose to 37,046, or by 7·5 per cent., the increase in cases returned as true was considerably (5·3 per cent.) smaller. There was an increase of 8·4 per cent. of offences under the Indian Penal Code. A case of some note was the Jodmoha Dakaity, in which a gang of Deccani Hamals from the Bombay Presidency looted in broad daylight a Treasury remittance of Rs. 12,000; the offenders were, however, quickly tracked down, and the treasure recovered. As regards original jurisdiction, the percentage of persons convicted to the total number whose cases were disposed of again fell from 39 to 37·4. The tendency, however, of private persons to use the Criminal Courts for ulterior purposes must be borne in mind. For example, in cases of minor hurt, out of 14,534 persons disposed of, only 16·2 per cent. were convicted, 57·5 per cent. being acquitted or discharged. The number of appeals by convicted persons to the Superior Courts fell from 270 to 257; in 81·7 per cent. of the appeals disposed of the finding, and in 70·8 per cent. the finding and sentence of the Lower Courts were confirmed. In the Courts of Session and in the District Courts the percentages of appellants whose sentences were upheld were respectively 66·2 and 59·9, against 70·4 and 58·6 in 1911. In six cases the local government appealed against the acquittal of 16 persons; as regards 11 of them the court refused to intervene; two it convicted; and, as regards the remaining three, it restored the sentence of the magistrate.

**Burma.**—The year 1912 was marked both in Lower and Upper Burma by a growth of crime. In Lower Burma the responsibility is attributed mainly to decay of religious belief, ignorance, and disease. Even in Lower Burma, however, where the increase in the number of cases reported reached 7,314, the majority of the increase occurred in breaches of special and local laws. In Upper Burma also it is suggested that the increase in crime is due to the weakening of the old Burmese methods of administration and of the influence of the Buddhist priesthood in secular matters. Three to four times as many persons in proportion to the population were sentenced to rigorous imprisonment in Burma as in any other province of India, and the number of cases brought to trial per 10,000 of the population in Upper Burma has advanced in the decade 1903 to 1912 from 46 to 58. As regards serious offences, however, the only increases worthy of notice were under hurt and robbery and dakaity, both in Lower Burma. In Lower Burma there was an increase of nearly 50 per cent. in the number of short sentences of imprisonment passed. In Upper Burma there was an improvement over the figures of 1910 with respect to the use of the preventive sections of the Code of Criminal Procedure, but they were not altogether satisfactory. The increase (1,375) in the number of persons punished accorded with the number of offences reported and persons convicted; 81·61 of them were sentenced to fines without imprisonment.

**Bihar and Orissa.**—There was a large increase in the number of criminal offences reported, both under special and local laws and under the Penal Code. There was a slightly larger percentage in the number of cases which were found to be false and of complaints dismissed. In the Magistrates' Courts 49·4 per cent. of the persons accused, and in the Courts of Sessions 61·6 per cent. of the persons tried, as against 63·9 per cent. in 1911, were convicted. In the appellate jurisdiction the High Court decided 304 appeals against sentences of Courts of Session, and upheld in 243, and reversed in 17 instances the orders passed. The percentage of appellants entirely unsuccessful was 75·2, against 73·9 in 1911. In the Sessions Courts the results of admitted appeals were more favourable, and in the Magistrates' Courts the results of appeals less favourable, on the whole, to appellants. Fourteen references for confirmation of the death sentence were made during the year. In the 10 which were decided 11 persons were concerned; the death sentence was confirmed in four cases and commuted in four cases, and two persons were acquitted. In two of the three cases of appeals by the local Government conviction was secured; the third case was a complicated one involving a considerable number of persons.

(Jails.)

## Jails.

The variations of the jail population in British India during the last five years are shown in the following table:—

| | 1912. | 1911. | 1910. | 1909. | 1908. |
|---|---|---|---|---|---|
| Jail population of all classes on 1st January | 91,241 | 102,429 | 103,363 | 103,784 | 101,336 |
| Admissions during the year | 487,472 | 463,282 | 474,241 | 489,051 | 520,377 |
| Aggregate | 578,713 | 565,711 | 577,604 | 592,835 | 621,713 |
| Discharged during the year from all causes | 477,464 | 474,464 | 475,183 | 489,481 | 517,930 |
| Jail population on 31st December | 101,249 | 91,247 | 102,421 | 103,354 | 103,783 |
| Convict population on 1st January | 79,420 | 91,505 | 92,605 | 91,819 | 89,457 |
| Admissions during the year | 158,762 | 152,396 | 154,973 | 160,391 | 173,175 |
| Aggregate | 238,182 | 243,901 | 247,578 | 252,210 | 262,632 |
| Released during the year | 144,674 | 151,935 | 154,769 | 157,076 | 168,599 |
| Casualties, &c. | 3,464 | 3,360 | 3,406 | 3,528 | 3,629 |
| Convict population on 31st December | 88,914 | 79,668 | 91,271 | 91,606 | 90,404 |

A decrease in the number of prisoners admitted to jail occurred in the United Provinces and in Bihar and Orissa. The daily average number of prisoners, which has steadily decreased since 1908, fell in 1912 by 3,926, returning approximately to the figures for 1907. The chief decreases occurred in Bengal (1,328) Central Provinces and Berar (444), and the United Provinces (1,600), which returned the lowest figure ever recorded; the chief increases in the daily average were those of 320 in the Punjab and 65 in the North-West Frontier Province.

Over one-half of the total number of convicts received in jails during the year came from the classes engaged in agriculture or cognate pursuits. About 127,500 were illiterate. The percentage of previously convicted prisoners fell from 16·3 to 14·5, while there was a decrease of 43 in the number of youthful offenders. The following statistics show, in round figures, the nature and length of the sentences imposed during the year:—Not exceeding one month, 43,500; above one month and not exceeding six months, 61,500; above six months and not exceeding one year, 27,500; above one year and not exceeding five years, 20,500. The remainder were major sentences, viz.:—2,333 for terms above five and not exceeding ten years; 235 for terms exceeding ten years; 1,768 to transportation beyond seas; and 757 to death.

Consonantly with the decrease in the average daily strength, the number of offences committed by convicts fell; and there was a decrease of about 4,000 in serious offences dealt with by major punishments. The figures for the different provinces are given in the following table:—

| Province. | 1912. | | | 1911. | | |
|---|---|---|---|---|---|---|
| | Daily Average Population. | Offences dealt with by Criminal Courts. | Offences dealt with by Superintendents. | Daily Average Population. | Offences dealt with by Criminal Courts. | Offences dealt with by Superintendents. |
| Madras | 8,875 | 8 | 10,690 | 9,898 | 6 | 11,262 |
| Bombay | 8,905 | 14 | 20,733 | 8,443 | 15 | 22,641 |
| Bengal | 10,092 | 16 | 21,776 | 11,128 | 30 | 20,553 |
| United Provinces | 20,350 | 33 | 30,870 | 21,862 | 12 | 30,461 |
| Punjab | 11,099 | 35 | 33,689 | 10,992 | 58 | 34,322 |
| Burma | 15,291 | 33 | 34,236 | 15,339 | 44 | 34,510 |
| Assam | 1,625 | 15 | 2,227 | 1,788 | 13 | 1,888 |
| Central Provinces and Berar | 2,816 | 21 | 14,671 | 3,278 | 26 | 17,416 |
| Bihar and Orissa | 5,926 | 7 | 16,210 | 6,631 | 10 | 15,275 |
| North-West Frontier Province | 1,090 | 2 | 885 | 1,076 | 2 | 897 |
| Coorg | 53 | 2 | 28 | 58 | — | 39 |
| Total | 86,122 | 186 | 186,015 | 90,493 | 216 | 189,364 |

(Jails.)

The total number of corporal punishments again showed a decrease, from 496 to 407. The total number of cases in which penal diet (with and without solitary confinement) was prescribed was 8,806 as compared with 9,358 in the preceding year.

Total expenditure rose from £523,398 to £532,751, and total cash earnings from £95,106 to £98,673; there was, consequently, an increase of £5,787 in the net cost to Government. Excluding Coorg, the provinces in which the average cost of maintenance was highest were, in the order named, the Central Provinces, Bengal, Assam, Bihar and Orissa.

In Indian jails the arrangements for counteracting the influence of adverse climatic and other conditions and for preventing the spread of communicable diseases are being more extensively and thoroughly applied every year, with the result that as regards the death rates the ratio per mille of average strength, in some of the provinces at least, reached a figure which it is improbable can ever be greatly improved, while, on the other hand, a decrease in other provinces can safely be predicted. The year 1912, which was a generally healthy year as compared with 1911, saw the ratio improved from 23·20 in 1911 to 20·19. The figures for the various provinces show the considerable range from 38·37 and 36·10 in Coorg and Assam to 10·4 and 11·56 in the United Provinces and in Madras respectively. The latter figures are perhaps too low to be considered quite normal. The record of Madras, which reduced the ratio from 29·28 in 1908 to 11·56, is creditable. All provinces showed a decrease over the figures of 1911, save Coorg and Burma. Cases of tubercle of the lungs decreased in all provinces except in Bombay, Bihar and Orissa, and in Burma, while those of malaria also showed a general improvement for which the character of the year was largely responsible, the figures for inside reflecting those for outside the jails. Overcrowding was responsible to some extent for the increase in Burma, but two prisons were responsible for a large part of the increased ratio from 12·28 in 1911 to 20·69 in 1912; in the case of the one the cause was the admission of a number of prisoners in poor health, and in the case of the other the outbreak of an epidemic. In Bengal dysentery, though showing a marked falling off in the number of admissions and of deaths, was yet again responsible for the largest number of deaths, due mainly to the poor health prevalent in the Eastern Districts.

(Form of Accounts.)

## CHAPTER III.

## FINANCE.


| | |
|---|---|
| Form of Accounts. | Capital Outlay on Public Works. |
| Gross Revenue and Expenditure. | Debt. |
| Net Revenue and Expenditure. | Currency and Exchange. |
| Provincial Finance. | Banks. |
| Home Charges. | |


*(For further details, see Statistical Abstract for British India, Tables 44 to 89 and 97.)*

### Form of Accounts.

The accounts of the Government of India show the transactions in India in rupees; the totals of these transactions are then converted into pounds, at the rate of Rs. 15 = £1: the sterling transactions in England are next stated: and the last two sets of figures are added together, so as to show in pounds the combined transactions in India and in England. The comparatively small sums which have to be brought to account owing to the facts that the remittances to defray the net expenditure in England are not effected at exactly sixteenpence to the rupee are included in a single line under the head of Exchange.

### Gross Revenue and Expenditure.

The Gross Revenue and Expenditure of British India in 1911–12 and 1912–13 were as follows:—

| | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Revenue | 82,835,750 | 86,862,598 |
| Expenditure | 78,895,416 | 83,754,964 |
| Surplus | £3,940,334 | £3,107,634 |

In these figures all receipts are included in the total of revenue and all outlay in the total of expenditure, with the one exception that the working expenses of railways and the surplus profits paid to certain railway companies are treated not as expenditure but as a deduction from Revenue. The financial position of the Government can, however, be much better appreciated by reference to the following table of Net Revenue and Expenditure, in which the interest charges as well as the working expenses of the Railways, the interest charges and working expenses of Irrigation Works, the cost of the cultivation and manufacture of opium, and the charges against other revenue-earning departments (excluding cost of collection) are treated as deductions from revenue, and the receipts of spending departments are treated as deductions from expenditure.

(Gross Revenue and Expenditure.)

## NET REVENUE.

| | 1911-12. | | 1912-13. | | Increase (+) or *Decrease* (—). | |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ |
| Land Revenue, &c.: | | | | | | |
| Land Revenue | 20,000,327 | | 20,519,247 | | + 518,920 | |
| Forest | 1,945,642 | | 2,146,667 | | + 201,025 | |
| Tributes from Native States. | 393,648 | | 419,367 | | + 25,719 | |
| | | 22,339,617 | | 23,085,281 | | + 745,664 |
| Opium: Net Receipts | — | 5,228,212 | — | 4,515,685 | — | — *712,527* |
| Taxation: | | | | | | |
| Salt | 3,136,736 | | 3,077,118 | | — *59,618* | |
| Stamps | 4,759,534 | | 5,009,774 | | + 250,240 | |
| Excise | 7,532,880 | | 8,199,349 | | + 666,469 | |
| Provincial Rates | 548,100 | | 551,071 | | + 2,971 | |
| Customs | 6,286,729 | | 7,049,254 | | + 762,525 | |
| Income Tax | 1,642,051 | | 1,731,167 | | + 89,116 | |
| Registration | 444,738 | | 480,984 | | + 36,246 | |
| | | 24,350,768 | | 26,098,717 | | + 1,747,949 |
| Commercial Undertakings: | | | | | | |
| Post Office | 125,809 | | 235,869 | | + 110,060 | |
| Telegraph | — *6,509* | | 68,178 | | + 74,687 | |
| Railways | 3,787,770 | | 4,803,354 | | + 1,015,584 | |
| Irrigation | 805,169 | | 1,109,289 | | + 304,120 | |
| | | 4,712,239 | | 6,216,690 | | + 1,504,451 |
| Mint | — | 250,593 | — | 345,016 | — | + 94,423 |
| Exchange | — | 105,697 | — | 100,879 | — | — *4,818* |
| Total Net Revenue £ | | 56,987,126 | | 60,362,268 | | + 3,375,142 |

## NET EXPENDITURE.

| | 1911-12. | | 1912-13. | | Increase (+) or *Decrease* (—). | |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ |
| Debt Services (excluding amounts charged under Railway Revenue Account and irrigation. | — | 588,994 | — | 336,827 | — | — *252,167* |
| Military Services: | | | | | | |
| Army | 18,357,180 | | 18,348,723 | | — *8,457* | |
| Marine | 365,828 | | 392,259 | | + 26,431 | |
| Military Works and Special Defence Works. | 835,572 | | 824,484 | | — *11,088* | |
| | | 19,558,580 | | 19,565,466 | | + 6,886 |
| Collection of Revenue | — | 6,383,531 | — | 6,514,157 | — | + 130,626 |
| Civil Services: | | | | | | |
| Civil departments | 15,228,035 | | 15,353,908 | | + 125,873 | |
| Miscellaneous civil charges. | 4,191,444 | | 4,261,904 | | + 70,460 | |
| Civil works (including railways charged to provincial or local revenues). | 5,127,124 | | 5,708,322 | | + 581,198 | |
| | | 24,546,603 | | 25,324,134 | | + 777,531 |
| Famine Relief and Insurance | — | 1,000,000 | — | 1,000,000 | — | — |
| Provincial Adjustments: | | | | | | |
| 1. Charge against Revenue of the year arising from increase of provincial balances. | — | 969,084 | — | 4,514,050 | — | + 3,544,966 |
| 2. Diminution of the charge against Revenue of the year, owing to expenditure being met from provincial balances. | — | — | — | — | — | — |
| Total Net Expenditure charged against Revenue. | | 53,046,792 | | 57,254,634 | | + 4,207,842 |
| Surplus (+) or Deficit (—) | | + 3,940,334 | | + 3,107,634 | | — *832,700* |

**(Gross Revenue and Expenditure.)**

Thus there was in 1912–13, as compared with 1911–12, an increase of net revenue of £3,375,142 and an increase in net expenditure of £4,207,842. Detailed explanations of the figures of revenue and expenditure are annually laid before Parliament in the Financial Statement of the Government of India and in the Explanatory Memorandum by the Secretary of State.

## Provincial Finance.

Under the system of decentralisation of finance, begun by Lord Mayo in 1870 and subsequently developed by successive stages, the Government of India assigns to the Provincial Governments fixed shares of the revenue collected by them under certain heads. From the revenue so assigned the Provincial Governments are required to meet the whole of the expenditure within their respective provinces under certain heads, and a portion of the expenditure under other heads. The revenue retained by the Government of India for its own purposes and for meeting the expenditure incurred by the Secretary of State in England is described in the accounts as Imperial, and that which is assigned to the Provincial Governments is described as Provincial. The expenditure is similarly classified. The Provincial Settlements, by which the classification into Imperial and Provincial of the various items of revenue and expenditure and the ratio of division of the divided heads are governed, have been placed on a quasi-permanent basis with the object of giving to the Provincial Governments as large an interest as possible in the careful collection of revenue and in economy of expenditure. The principal heads of revenue which are wholly Imperial are Opium, Salt, Customs, Post Office, Telegraph, Mint, Exchange, and Railways; the principal divided heads being Land Revenue, Irrigation, Stamps, Excise, Assessed Taxes, and Forests. On the expenditure side of the accounts the charge for Military Services and the charges under certain minor heads (Territorial and Political Pensions, Ecclesiastical, &c.) are entirely Imperial; "General Administration" is divided; most other important heads of expenditure are provincial.

The net revenue of 1911–12 and 1912–13 and the expenditure charged against the revenue of those years were divided into Imperial and Provincial as follows:—

| | 1911–12. | | | 1912–13. | | |
|---|---|---|---|---|---|---|
| | Imperial. | Provincial. | Total. | Imperial. | Provincial. | Total. |
| | £ | £ | £ | £ | £ | £ |
| Net Revenue - - | 33,024,030 | 23,963,096 | 56,987,126 | 31,973,700 | 28,388,568 | 60,362,268 |
| Net Expenditure - | 29,083,696 | 23,963,096 | 53,046,792 | 28,866,066 | 28,388,568 | 57,254,634 |

The equilibrium between Provincial Revenue and Provincial Expenditure, which is shown in these figures, is due to the fact that, if the Provincial Governments spend less in any year than their income, the saving is added to their balances and treated in the general accounts prepared by the Government of India as though it had been spent, and that similarly excess expenditure by Provincial Governments, being met from their balances, is not charged in the accounts prepared by the Government of India against the revenues of the year. In 1911–12 the Provincial Governments added to their balances the sum of £969,084, and in 1912–13 the sum of £4,514,050.

*Contribution by each Province towards Expenditure of the Central Government.*

The following table shows for each province separately the amount by which the total revenue collected therein (whether classified in the accounts as Imperial or Provincial) exceeds or falls short of the total expenditure incurred therein, and thus indicates the extent to which each province contributes towards the expenditure of the Government of India and the Secretary of State, or draws upon the general revenues:—

| Provinces, &c. | 1911–12. | | Provinces, &c. | 1912–13. | |
|---|---|---|---|---|---|
| | Excess of Revenue. | Excess of Expenditure. | | Excess of Revenue. | Excess of Expenditure. |
| | £ | £ | | £ | £ |
| Bengal | 8,511,764 | — | Bengal | 6,500,805 | — |
| Eastern Bengal and Assam | 537,732 | — | Bihar and Orissa | 323,737 | — |
| United Provinces | 2,260,342 | — | Assam | — | *82,167* |
| Punjab | 1,493,950 | — | United Provinces | 1,904,029 | — |
| Burma | 2,280,092 | — | Punjab | 1,453,432 | — |
| Central Provinces and Berar. | 293,535 | — | Burma | 2,184,079 | — |
| Madras | 4,562,552 | — | Central Provinces and Berar. | 125,042 | — |
| Bombay | 5,248,966 | — | Madras | 4,313,692 | — |
| North-West Frontier Province. | — | *384,734* | Bombay | 6,926,471 | — |
| India, General | — | *1,998,569* | North-West Frontier Province. | — | *445,846* |
| England | — | *18,865,246* | India, General | 106,652 | — |
| | | | England | — | *19,302,292* |
| Net result | Surplus £3,940,334 | | Net result | Surplus £3,107,634 | |

## Home Charges.

The net expenditure in England chargeable to revenue, as shown in the preceding table, may be classified under the following principal heads :—

| | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Interest and management of debt, and payment of interest and annuities on account of railways and irrigation works. | 10,768,128 | 10,940,421 |
| Payments in connection with Civil Departments in India | 209,152 | 157,671 |
| India Office (excluding pensions) | 203,426 | 203,253 |
| Army and marine effective charges | 1,904,814 | 1,141,881 |
| Stores of all kinds charged against revenue | 1,202,546 | 1,345,907 |
| Furlough allowances | 996,050 | 994,480 |
| Non-effective charges (pensions and gratuities) | 4,481,129 | 4,518,679 |
| Total £ | 18,865,245 | 19,302,292 |

## Capital Outlay on Public Works.

The total capital outlay on railways and irrigation works during the two years was as follows :—

| | 1911–12. | 1912–13. |
|---|---|---|
| Amount supplied by State borrowing or from the Cash Balances, without being charged against the Revenue of the year :— | £ | £ |
| State Railways | 6,981,633 | 8,799,562 |
| Irrigation Works | 1,536,531 | 1,408,329 |
| Amount met by Debenture Stock issued by Railway Companies | — | 13,333 |
| Amount defrayed from Revenue : | | |
| Provincial and local Railways | 836 | 4,266 |
| Protective Railways | 44,275 | 41,411 |
| Protective Irrigation Works | 383,465 | 426,501 |
| Other Irrigation Works* | 10,506 | 9,400 |
| Total Direct Outlay by the State | 8,957,246 | 10,702,802 |
| Outlay by companies guaranteed or subsidised by Government | 934,791 | 1,083,376 |
| Branch lines not on firm guarantee | 51,739 | 58,951 |
| Total Capital Outlay on Railways and Irrigation £ | 9,943,776 | 11,845,129 |

* Excluding capital outlay on the minor works, which is met from revenue.

(Debt.)

## Debt.

**Amount of Debt.**—The debt of India on the 1st April 1912 was :—

| | £ |
|---|---|
| In England | 178,486,597 |
| In India, Rs. 1,39,96,36,205, equivalent, at 1*s.* 4*d.* the rupee, to | 93,309,080 |
| Total | £271,795,677 |

1912–13.—In England £4,500,000 India Sterling Bills, £500,000 India bonds, and £1,477,600 Railway debenture bonds were discharged during the year. £3,000,000 3½ per cent. India stock was raised at a fixed price of 93 in April 1912, and £495,000 was raised by an issue of Railway debenture bonds in August 1912.

In India a 3½ per cent. rupee loan of 3 crores was issued in July 1912 at an average price of Rs. 96·2.

The total debt outstanding on 31st March 1913 was as follows :—

| | £ |
|---|---|
| In England | 179,179,193 |
| In India, Rs. 1,42,83,64,790, equivalent, at 1*s.* 4*d.* the rupee, to | 95,224,319 |
| Total | £274,403,512 |

**Classification of the Debt.**—The total debt is classified in the accounts as (1) Public Works Debt, (2) Ordinary Debt. The amount entered as belonging to the former category is the equivalent of the total capital expenditure which has been incurred by the State on public works, together with the amount advanced to railway companies for capital expenditure ; the "Ordinary Debt" consists of the remainder of the debt. In any year in which, owing to the use of surplus revenue or deposits for the construction of public works, the capital expenditure of the year exceeds the amount of debt incurred in the year, the effect of this system of classification is to cause a decrease to be shown in the amount of the Ordinary Debt.

The classification of the debt outstanding on the 31st March 1912 and the 31st March 1913 was as follows :—

| | 1912. | 1913. |
|---|---|---|
| (*a*) Permanent debt :— | £ | £ |
| Debt for railways | 203,015,769 | 211,832,819 |
| Debt for irrigation works | 35,733,184 | 37,552,030 |
| For initial expenditure on the new capital at Delhi | 4,992 | 119,886 |
| Total of public works debt | 238,753,945 | 249,504,735 |
| Balance, being ordinary debt | 33,041,732 | 24,898,777 |
| Total permanent debt on 31st March | 271,795,677 | 274,403,512 |
| (*b*) Temporary debt incurred on security of India bills :— | | |
| Debt for railways | 1,500,000 | Nil. |
| Debt for general purposes | 3,000,000 | Nil. |
| Total debt (permanent and temporary) on 31st March | £276,295,677 | £274,403,512 |

Under the East India Loans (Railways and Irrigation) Act, 1910, the Secretary of State in Council was empowered to borrow in the United Kingdom, as and when necessary, up to £25,000,000 for the purposes of Indian public works. The grant of fresh borrowing powers was required owing to the fact that the powers granted by previous East India Loans Acts were becoming exhausted.

## Currency and Exchange.

**Currency Legislation.**—Up to 1893 the standard of value in India was silver, the rupee (180 grains of silver, eleven-twelfths fine) and the half rupee being full legal tender for the payment of debts, and the mints being open to the receipt from the public of silver for coinage without limit. From 1871 to 1893 the exchange value of the rupee (*i.e.*, the sterling rate at which bills of exchange payable in India were sold) fell almost continuously, the fall being due to the decline in the price of silver, by which the value of the rupee was necessarily governed. Apart from its effect on trade the continual fall in the rupee caused serious difficulties to the Government, because, its revenue being collected in rupees, it is compelled to provide for the greater part of its sterling payments by the sale in London for sterling of bills of exchange and telegraphic transfers payable in rupees in India, and the number of rupees required for defraying any given amount of sterling expenditure increased with each fall in the sterling rate at which bills were sold. In the period from 1871 to 1893 the rate fell from about 2*s.* the rupee (ten rupees to the £) to about 1*s.* 3*d.* the rupee (sixteen rupees to the £). In view of the embarrassment arising from this depreciation in the standard of value it was decided in 1893, in accordance with the recommendation of Lord Herschell's Committe, that silver should no longer be coined on presentation by the public, but the right was given to the public to demand from Government rupees in exchange for gold at the rate of 15 rupees for £1 without limit of amount. Silver thus ceased to be the standard of value in India (though it is still used as before as the chief material of currency); and the exchange value of the rupee ceased to coincide with the price of silver. In 1898 a Committee was appointed, under the chairmanship of the late Lord Wolverhampton, then Sir Henry Fowler, to consider certain proposals made by the Government of India for the completion of the policy adopted in 1893. Sir Henry Fowler's Committee reported in 1899, and recommended that the decisions reached on the recommendations of Lord Herschell's Committee in 1893 should be maintained, and that the English sovereign should be declared legal tender in India at the rate of one sovereign to fifteen rupees (*i.e.*, 1*s.* 4*d.* to the rupee). These recommendations were accepted by the Government. Since 1898–9 the exchange value of the rupee has remained steady at about 1*s.* 4*d.**

**Gold Standard Reserve.**—From the 1st April 1900, the net profit from the coinage of rupees has been held as a special reserve, apart from the ordinary revenue. Up to 1906 practically the whole amount was remitted to England and applied to the purchase of British Government securities, the interest realised being added to the fund and invested, but in that year it was decided that a portion of the reserve should in future be held in silver in India. In 1907–08 and 1908–09 half the profits on coinage were applied to capital expenditure on railways. In 1909–10 and 1910–11 no coinage was undertaken from purchased silver. The sum shown under the former year in the marginal table, which gives the annual amount of the profits on coinage in each year from 1900–1 to 1912–13 credited to the reserve under the arrangements above described, is made up of arrears of profit on the coinage of previous years. In June 1912 it was decided that the interest on investments and the profits on coinage thereafter received, except profits retained in India for building up the silver branch of the Reserve, should be held in gold at the Bank of England until the amount so held reached £5,000,000, and that no portion of the profits on coinage should be used for railway purposes until the total sterling assets of the gold Standard Reserve amounted to at least £25,000,000.

| | £ |
|---|---|
| 1900–01 | 3,031,294 |
| 1901–02 | 415,100 |
| 1902–03 | 264,028 |
| 1903–04 | 2,627,575 |
| 1904–05 | 1,790,380 |
| 1905–06 | 3,677,880 |
| 1906–07 | 4,014,426 |
| 1907–08 | 1,123,603 |
| 1908–09 | 51 |
| 1909–10 | 25,190 |
| 1910–11 | — |
| 1911–12 | — |
| 1912–13 | 3,265,698 |

The constitution of the reserve on the 31st March 1913 was as follows:—

| | £ |
|---|---|
| Sterling securities held in England (market value) | 15,945,669 |
| Cash held in England on account of the Reserve | 1,005,664 |
| Gold held at the Bank of England | 1,620,000 |
| Rupees held in India on account of the Reserve | 4,000,000 |
| Total | £22,571,333 |

* A Royal Commission on Indian Finance and Currency was appointed in April 1913 and issued its final report early in March 1914 (Cd. 7236).

**(Currency and Exchange.)**

**Exchange and Remittance.**—During the years 1910–11, 1911–12, and 1912–13 the sale by the Secretary of State of bills and telegraphic transfers on India was as follows:—

1910–11, £26,212,866 at an average rate of 1*s.* 4·061*d.* per rupee.
1911–12, £27,058,550 „ „ 1*s.* 4·083*d.* „
1912–13, £25,743,710 „ „ 1*s.* 4·058*d.* „

The regular demand for the bills and telegraphic transfers sold by the Secretary of State is due to the fact that they enable merchants and bankers to make the payments in India which are required mainly in consequence of the normal excess of India's exports over her imports.

**Coinage.**—The silver coinage at the Indian Mints was:—

| | 1911–12. Number coined. | 1912–13. Number coined. |
|---|---|---|
| Rupees | 24,508,624 | 187,529,154 |
| Half-rupees | 2,878,273 | 4,894,669 |
| Quarter-rupees | 3,412,980 | 11,863,433 |
| Eighth-rupees | 10,186,518 | 19,420,777 |
| British Dollars (for export to Hong Kong) | 37,470,509 | 5,672,075 |
| „ „ subsidiary pieces | 661,465 | 444,628 |

The value of the copper, bronze, and nickel coinage during the two years was as follows:—

| | 1911–12. £ | 1912–13. £ |
|---|---|---|
| Copper | 61,708 | 5,519 |
| Bronze | 2,793 | 127,897 |
| Nickel | 174,000 | 165,733 |

**Paper Currency.**—Under the Indian Paper Currency Act, 1910 (II. of 1910), which consolidated and amended the law relating to Paper Currency, Notes of the following denominations, viz., Rs. 5, Rs. 10, Rs. 50, Rs. 100, Rs. 500, Rs. 1,000, and Rs. 10,000 are issued to the public. The issue of 20-rupee notes has been discontinued.

There are seven currency circles having their headquarters at Calcutta, Cawnpore, Lahore, Bombay, Karachi, Madras, and Rangoon respectively.

Prior to the passing of the Paper Currency Act of 1910 the 5-rupee note alone was legal tender throughout India and payable at any office of issue in the country; notes of higher value were legal tender only within the currency circles in which they were issued. The Act of 1910 "universalised" notes of a denominational value of 10 and 50 rupees, and thus marked an important stage in the development of the paper currency system of India. The 100-rupee note was also made universal from the 1st April 1911. A reserve is held against the notes equal to their full value in (1) gold (2) silver, and (3) securities (value taken at cost price). Securities of the Government of India and of the British Government may be held as part of the reserve up to a limit of £9,333,300 (Rs. 14,00,00,000), of which the British Government securities may not exceed £2,667,000 (Rs. 4,00,00,000); the remainder of the reserve must be held in gold or silver coin or bullion. On the 31st March 1913 the value of the total amount of notes in circulation was £45,985,200, being more by £5,076,800 than on the corresponding date in 1912. Excluding the notes held in the reserve and other treasuries (£m. 10·4) and by the Presidency Banks at their Head Offices (£m. 4), the active circulation among the people on 31 March 1913 was

£m. 31·5, as compared with £m. 29·7 on 31 March 1912. The constitution of the Paper Currency Reserve was as follows :—

| | £ |
|---|---|
| Gold | 25,683,400 |
| Silver coin | 10,968,500 |
| Silver bullion | — |
| Securities of the Government of India | 6,666,700 |
| Securities of the British Government | 2,666,600 |
| | 45,985,200 |
| *Deduct* amount due on bills drawn by one circle on another | Nil |
| | £45,985,200 |

## Banks.

**The Presidency Banks.**—The three Presidency Banks of Bengal, Madras, and Bombay are bodies corporate, constituted under the Presidency Banks Act of 1876. This Act, as modified by subsequent Acts, regulates the constitution and management of the banks and prescribes the kind of business that they may undertake. The most important statutory restrictions are that they may not borrow out of India, nor draw, discount, buy, or sell bills of exchange, or other negotiable securities payable outside India or Ceylon, except that, when they receive interest, or the proceeds of the sale of securities, on behalf of their principals, they may draw bills of exchange or grant letters of credit, payable out of India, for the purpose of remitting such interest or proceeds at the risk of the principals. The effect of these restrictions is to prevent the Presidency Banks from dealing in foreign exchanges or otherwise employing their capital out of India.

The Presidency Banks, in accordance with the provisions of agreements into which the Government of India has entered with them, act as bankers for the Government of India, paying and receiving money on its behalf and managing the public debt; they receive in return a fixed annual payment, and a commission on the amount of the public debt which they manage. The Government also undertakes to keep a minimum balance at each bank, or, failing this, to pay interest on the deficiency.

The following table shows the extent of the business of the Presidency Banks on 31st December 1913 :—

| | Bank of Bengal. | Bank of Madras. | Bank of Bombay. |
|---|---|---|---|
| | £ | £ | £ |
| Paid-up capital | 1,333,333 | 500,000 | 666,667 |
| Reserve | 1,273,333 | 486,667 | 706,667 |
| Public deposits | 2,069,830 | 577,161 | 1,337,448 |
| Other deposits | 12,166,356 | 5,373,107 | 6,771,129 |

**Banks registered under the Indian Companies Act.**—The number of joint stock companies registered as engaged in banking or loan operations in India, on 31st March 1913, was 513. The majority of these companies consist of societies with a relatively small capital.

# CHAPTER IV.

## LAND REVENUE.

| | |
|---|---|
| Land Tenures. | Revenue Assessments, &c. |
| Land Legislation. | Collection of the Revenue. |
| Revenue Surveys, Settlements, &c. | Wards' and other Estates. |

*(For further details see Statistical Abstract of British India, Tables 45 to 49 and 122.)*

The present chapter deals with Land Revenue (including revenue from Capitation Tax, Fisheries, &c.) and with subjects appertaining thereto. From time immemorial a share of the produce of the land has been the chief source of public revenue in India. Land revenue is still the mainstay of the Government, constituting about 36 per cent. of the total net revenue that accrues to the Indian Exchequer.

## Land Tenures.

Owing to its far-reaching social and political effects the proper administration of the land revenue has always been one of the chief problems of the Indian Government, and during the early years of British rule the best methods of assessment were keenly debated. In 1793 Lord Cornwallis introduced into Bengal a permanent settlement, by which the demand of the State was fixed and made for ever unalterable. Other systems were gradually evolved, and at length over the greater part of India a system of periodical settlements was established, under which the State demand is revised at recurring periods of 20 to 30 years, the latter period prevailing in all the larger provinces except the Punjab and the Central Provinces, where settlements are usually made for 20 years, and in Burma, where the term of 20 years is now being adopted. At these settlements careful surveys are made of all holdings and records of rights in the land. Under the system of periodical revisions of the land assessment the State secures a share in the increased rental value arising from the general progress of the community. Of late years measures have been taken to exempt improvements from assessment, and generally to make the enforcement of the rights of the State as little burdensome as is possible to the revenue-payer. Periodical revision also affords the opportunity of reducing the assessment in villages or tracts which have declined in prosperity, and of correcting inequalities arising from any cause.

When the revenue is assessed by the State, permanently or temporarily, on an individual or community owning an estate, and occupying a position identical with, or analogous to, that of a landlord, the assessment is known as *zamindari;* where the revenue is imposed on individuals who are, or who represent, the actual occupants of holdings, the assessment is known as *ryotwari.* Under either system there may be rent-paying sub-tenants. In southern India, where most of the land is held by petty occupiers direct from the State, the occupiers have the right to retain their holdings so long as they pay the revenue due from them. In both the permanently and temporarily settled districts of northern India laws have been passed to safeguard tenant rights. The permanently settled districts, in which all holdings are *zamindari,* cover most of Bengal and Bihar, and parts of Madras and the United Provinces. As regards temporarily settled districts, *zamindari* estates, held by proprietary groups or large individual proprietors, are chiefly found in the Punjab, the United Provinces, the Central Provinces, and Orissa, while in Bombay and Sind, Burma, Assam, Berar, and two-thirds of Madras the system of *ryotwari,* or peasant proprietors, prevails.

The appended table gives the acreage of the surveyed areas in which the various tenures prevailed during 1911–12. The figures include waste and uncultivated areas as well as cultivated lands, and merely indicate the extent to which the two systems respectively prevail.

(Land Tenures.)

*Figures in Thousands of Acres, omitting 000.*

| Province. | *Ryotwari* (Peasant Proprietors). | *Zamindari* (Individual Proprietors or Village Communities). | | Total. |
|---|---|---|---|---|
| | | Permanently settled. | Temporarily settled. | |
| Burma | 108,799 | — | — | 108,799 |
| Assam | 25,916 | 3,930 | 1,459 | 31,306 |
| Bengal | — | 38,789 | 10,780 | 49,569 |
| Bihar and Orissa | — | 41,452 | 11,760 | 53,212 |
| United Provinces of Agra and Oudh | — | 7,541 | 60,793 | 68,334 |
| Punjab | — | — | 62,215 | 62,215 |
| North-West Frontier Province | — | — | 8,438 | 8,438 |
| Bombay | 44,876 | — | 3,754 | 48,629 |
| Sind | 30,257 | — | — | 30,257 |
| Central Provinces | 1,837 | — | 40,639 | 42,476 |
| Berar | 11,327 | — | — | 11,327 |
| Madras | 61,577 | 29,179 | — | 90,756 |
| Ajmere-Merwara | — | 974 | 797 | 1,771 |
| Coorg and Manpur* | 1,044 | — | — | 1,044 |
| Total | 285,633 | 121,865 | 200,635 | 608,133 |

* Manpur is an isolated British *pargana* in Central India.

It will thus be seen that about 47 per cent. of the total area is held by peasant proprietors, while 20 per cent. is held by permanently settled, and 33 per cent. by temporarily settled, *zamindari* proprietors.

## Tenant Right and Land Legislation.

**Bengal, Bihar and Orissa, and Assam.**—Throughout the major part of Bengal and Bihar the relations between landlord and tenant are governed by the Bengal Tenancy Act, which continued to work satisfactorily. The withholding of rent receipts and the levy of illegal exactions in the form of cesses in addition to rents have by no means ceased, but the tenants are gradually learning to know their rights and to resist illegal demands. Settlement operations and the gradual preparation of a Record of Rights for the Province have taught tenants their rights and privileges, and the general spread of education tends to the same result. During 1912–13 there was practically no serious friction between landlord and tenant. Chota Nagpur was given in 1908 a special agrarian law of its own, passed to amend and codify the existing laws. It is said to be working well. It has had a most beneficial effect wherever the Record of Rights has been prepared, but the completion of this is an urgent necessity. The special Tenancy Bill introduced for Orissa previous to the partition of 1912 was held up in order that the Legislative Council of the new Province might be able to discuss it. It was passed in May 1913, with certain amendments.

**United Provinces.**—Owing to the protection afforded by the Agra Tenancy Act there has been a growth in the area occupied by tenants of 12 years' standing. Out of 20½ million acres held by ordinary tenants 14,133,662 acres were protected (that is, the landlords are debarred from arbitrary ejectment) on 30th September 1912—an increase of 114,000 acres in the year. Recorded occupancy tenancies now cover over 9 million acres. There was a large increase in the number of suits for enhancement of rent.

The Bundelkhand Alienation of Land Act, 1903, which is framed on the lines of the Punjab Land Alienation Act, continues to work satisfactorily. Its object is to place restrictions on the sale or other permanent alienation of land by the agricultural castes to the non-agricultural classes. Sales of land as between agriculturists and non-agriculturists showed a net transfer of land to the possession of the former in the districts to which the Act applies. Attempts to evade the Act were few. It is proposed to extend the restrictions on alienation to further districts.

**Punjab.**—The Punjab Land Alienation Act of 1900 was designed to protect hereditary agricultural tribes from expropriation by money-lenders. Its effect in preventing the transfer of land from agriculturists to non-agriculturists is undoubted, as shown by the figures for sales and mortgages. The anxiety of all classes to be

notified as agricultural tribes disposes of the allegation that credit has been impaired. This eagerness is enhanced by the widespread creation of proprietary rights in the canal districts. Evasions of the Act by non-agriculturists employing a dummy transferee gave some trouble, but this procedure has been rendered dangerous by orders passed in 1911–12.

**North-West Frontier Province.**—The Punjab Alienation of Land Act, 1900, as modified by the North-West Frontier Province Regulation No. I. of 1904, and as amended in 1908, has now been operative for eight years in three districts. The Act is appreciated by the zamindars and its operations appear to be beneficial. There is a growing tendency to purchase land outright rather than acquire mortgages.

**Madras.**—The difficulties in the working of the important measure for defining and regulating the position of tenants in the *zamindari* areas, known as the Madras Estates Land Act of 1908, are settling down as its provisions are getting to be better understood. Under this Act the status of occupancy ryot is recognised and both occupancy and non-occupancy ryots are protected from ejectment and enhancement of rent. The relations between landlord and tenant are on the whole fairly satisfactory.

**Bombay.**—The extension of the Deccan Agriculturists' Relief Act in 1905 from four selected districts to other parts of the presidency, has induced the cultivator to adopt sounder methods. Its working has been fortified by the restrictions imposed in certain parts on the alienation of land by the special tenure created by the Act of 1901. The ease with which the tenant can obtain outside employment has greatly strengthened his position as against the landlord.

During 1912–13 conciliators under the Deccan Agriculturists' Relief Act were abolished, and, as the result of an inquiry into its working, an amending Act is in contemplation.

## Revenue Surveys and Settlements and Land Records.

For the purpose of land revenue assessment revenue surveys are necessary. Cadastral maps showing the holdings are prepared, and corresponding field registers are made showing from whom the revenue assessment is to be realised, and also the amount of such assessment. The record also usually exhibits the existing rights in, and encumbrances on, the land. As the revenue records are carefully revised at short intervals a very extensive and complete system of registration by public entry is being built up, and transfers of land are easily attested. Settlements (or re-settlements) in new or in temporarily settled areas are always in progress. In consequence of improved methods the period occupied in the process is much shorter than formerly, and involves comparatively little harassment of the people.

**Bengal.**—The preparation of a complete survey and record of rights for the permanently settled area was inaugurated in 1891. Out of the total area in Bengal (including temporarily settled land) of about 65,000 square miles to which the Bengal Tenancy Act applies, the record had by September 1912, been completed for 10,266 square miles (including two entire districts) and was in course of preparation in seven districts for a total of 12,608 square miles. In permanently settled tracts (where the record is for the purposes of general well-being and not for assessment of revenue), three-fourths of the cost is recovered from the landlords and tenants concerned. In Faridpur, where the record is nearing completion, this recovery was commenced in 1911–12 without trouble. The record is urgently needed in view of the obscurity of agrarian relations in many parts. The cost has been considerable in some of the eastern divisions, but recent reforms have resulted in economy. The experiment of printing the record has proved a success.

Minor settlement operations were carried on under the supervision of district officers in 11 districts.

**Bihar and Orissa.**—The same programme for a complete Record of Rights, to cover permanently settled estates as well as temporarily settled, is being carried out here as in Bengal. Of the whole area (about 78,000 square miles) for which such record is required, only about 20,000 remained to be dealt with on 30th September 1912, and in about half this area operations were in various stages of progress. During 1911–12, 3,064 square miles were dealt with (besides the revision programme for Orissa, which is now practically completed). An experimental scheme for the maintenance of records is being tried in Balasore and Cuttack.

**Assam.**—Operations in Assam are under the same direction as those in Bengal for the present. It is hoped, if possible, to prepare a Record of Rights for the permanently settled portions of the Sylhet district, and experimental operations were started in 1912–13.

**United Provinces.**—During 1911–12 the regular settlement of Etawah and Fatehpur continued: that of Muttra will be undertaken when the period of the current revenue nears expiry. Settlement operations are contemplated in Naini Tal, Agra, and Pilibhit districts. The reorganised Land Records Department has made progress in all directions. The village maps are being brought up to date and, in order that they may be kept so, *patwaris* are receiving special instruction in methods of revision. Thus it is hoped to dispense with re-survey at the next settlements.

**Punjab.**—Settlement operations were in progress in ten districts; they have been completed in Amritsar and Gujranwala, with the result of an enhanced revenue demand of about 3 lakhs in the former and 2 lakhs in the latter. The new assessment of the Lower Chenab Colony will bring in a far larger enhancement. The amalgamation of the settlement and district subordinate staffs has had excellent results. Under the revised settlement scheme the cost and trouble of operations has been much reduced. The agriculturist element in the *patwari* staff was further strengthened, and its educational standard is improving.

**North-West Frontier Province.**—The land tenures and assessment methods of the Frontier Province resemble generally those of the Punjab. Records of Rights were reported in 1911–12 to be in good condition: the Land Records Staff was chiefly employed on mutation work.

**Burma.**—All the districts proposed for revenue settlement have now come under supplementary survey; revision survey took place in two districts. Of the 37 districts of the province 32 are settled. The five unsettled districts are hilly and sparsely populated, and it has been decided that settlement is not at present necessary. The area under supplementary survey (50,011 square miles) decreased in 1912–13 owing to the abandonment of work on a sparsely cultivated part of the Meiktila district which is to be assessed at fixed rates. Small areas in Akyab and Syriam districts came under extension survey. Settlement operations were conducted on 13 settlement circuits of which five were completed during the year. Owing to the very low rates of the first settlements, revisions always produce an enhanced demand. Three new settlements which were sanctioned during the year will ultimately produce an enhancement of demand of £40,000, but, owing to the policy of applying intermediate rates for a time when enhancements take place, this will not at once be realised. The cost of the settlements completed during the year was 7½ annas per occupied acre.

**Central Provinces and Berar.**—Revision operations took place in three districts, and correction of maps and records preparatory to settlement in three more. The Record of Rights for Berar made good progress; there is evidence that it is greatly appreciated.

**Madras.**—Six survey parties were at work during 1912–13 in seven districts. They dealt with 2,140 square miles—mostly revisional survey. Five settlement parties continued their operations. The aggregate land revenue demand of the districts either newly settled or re-settled is £3,586,838, an increase of £712,232 on the demand prior to settlement or re-settlement. The cost of the settlement operations up to the end of 1912–13 has been £1,254,996. The Land Records Department was, as in previous years, mainly confined to measures preliminary to maintenance.

**Bombay.**—The survey and settlement officers were engaged in demarcation, measurement, classification, and other work of a routine character. An important feature was the extensive programme of measuring subdivisions. Good progress was made with the Record of Rights, which has been completed for Government villages in the Presidency proper, but is still in process of compilation for alienated villages and for Sind.

## Revenue Assessments and Incidence.

Land revenue is realised in the form of an annual payment of cash, the assessment rates being subject to no alteration during the term of a settlement, though the amount leviable in any year may vary according to the area actually cultivated or to

**(Revenue Assessments and Incidence.)**

the condition of the harvest. Except in Bombay (where the assessment is not fixed in terms of produce), the land revenue is assessed so as to represent a share, not of the gross, but of the *net* produce (or net assets). In the zamindari, or landlord settlements, that widely prevail in Northern India, the cultivating tenant pays rent to a landlord. Of this rent the Government usually takes rather less than 50 per cent. as land revenue.

| | Incidence (in Rupees and Annas) of Land Revenue Assessment in fully assessed Area. | |
|---|---|---|
| | Per Acre of cultivated Area. | Per Head of Population. |
| | 1911–12. | 1911–12 |
| | Rs. a. | Rs. a. |
| Upper Burma | 1 9 | 1 13 |
| Lower Burma | 2 14 | — |
| Assam (*Ryotwari*) | 1 15* | — |
| Bihar and Orissa : | | |
| Permanently settled | 8 | 8 |
| Temporarily settled | 1 1 | |
| †Bengal : | | |
| Permanently settled | 15 | 11 |
| Temporarily settled | 1 12 | |
| Agra : | | |
| Temporarily settled | 1 14 | 1 9 |
| Permanently settled | 1 8 | 1 1 |
| Oudh : | | |
| Temporarily settled | 2 0 | 1 8 |
| Permanently settled | 1 1 | 1 5 |
| Punjab | 1 4 | — |
| North-West Frontier Province | 15 | — |
| Sind | 2 16 | — |
| Bombay : | | |
| *Ryotwari* | 1 10 | 2 8 |
| *Zamindari* | 14 | 1 4 |
| Central Provinces : | | |
| *Ryotwari* | 9 | 1 3 |
| *Zamindari* | 10 | |
| Berar | 1 6 | 3 0 |
| ‡Madras : | | |
| *Ryotwari* | 2 7 | 1 14 |
| *Zamindari*, permanently settled | 15 | 12 |

* Figures for cultivated area not available. The figures given are for the total fully assessed area.

† Based chiefly on 1907–8 figures. ‡ Figures for 1908–9.

The incidence of land revenue in fully assessed cultivated areas is shown in the marginal table. The most noticeable features are the low rates in the permanently settled areas and in the Central Provinces. In Madras and Sind the land revenue rates include the charges for irrigation.

It is certain that the Government now takes a very much smaller share of the gross product than was customary in pre-British days. The incidence of land revenue for all British India in 1912–13 works out at 1*s.* 8*d.* per head of the population.

The Government makes liberal reductions of assessments in cases of local deterioration, where such reductions cannot be claimed under the terms of settlement.

## Collection of the Revenue.

The fluctuations in the gross land revenue receipts (exclusive of those credited to irrigation) in past years may be seen from the following table :—

| Year. | Land Revenue Receipts (excluding those due to Irrigation). | Variation (Average of Five Years, 1881 5 = 100). |
|---|---|---|
| | £ | |
| 1881–5 (five years' average) | 14,748,000 | 100·0 |
| 1886–90 „ „ (annexation of Upper Burma) | 15,445,000 | 104·7 |
| 1891–5 „ „ | 16,522,000 | 112·0 |
| 1896–1900 „ „ (includes two famines) | 17,217,000 | 116·7 |
| 1900–5 „ „ | 18,483,000 | 125·3 |
| 1906–11 „ „ | 20,096,000 | 136·3 |
| 1911–12 (single year) | 20,765,000 | 140·8 |
| 1912–13 „ „ | 21,282,000 | 144·3 |

The general increase in land revenue is attributable to a variety of causes—to the inclusion of new territory (as Upper Burma); to the bringing of new land under

cultivation as in Lower Burma, the Central Provinces, Sind, and the Punjab; to the inclusion of Berar since 1st October 1902; and to the progress of settlements and re-settlements, which, owing to the generally enhanced values of land, usually result in additions to the land revenue. Irrigation canals have enabled the cultivable area to be greatly extended, especially in Sind and the Punjab. The land revenue is usually paid punctually, and it is seldom necessary to have recourse to imprisonment, sales of land, or other processes for the recovery of arrears.

The land revenue receipts in 1911–12 and 1912–13 were made up as follows:—

| | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Ordinary land revenue - - - - - | 19,713,069 | 20,380,505 |
| Assessment of alienated lands, less quit-rents* - | 654,842 | 654,700 |
| Sale of proprietary right of Government in land† - | 392,913 | 317,173 |
| Capitation tax, or house tax levied in lieu thereof‡ - | 639,343 | 649,987 |
| Sale of waste lands and redemption of land revenue | 26,467 | 26,930 |
| Recovery of survey and settlement charges§ - | 47,855 | 86,993 |
| Fisheries and other receipts - - - - | 641,673 | 704,425 |
| | £22,116,162 | £22,820,713 |
| *Deduct* portion of land revenue due to irrigation - | 1,351,465 | 1,538,245 |
| Total land revenue - - | £20,764,697 | £21,282,468 |

The charges in 1912–13 included £1,682,151 for district administration, £459,860 for survey and settlement charges, £986,692 for land records, and £737,600 direct charges of collection. The total charges were £3,868,029.

The total advances made by Government to cultivators during 1912–13 amounted to £889,195, and the total amount of advances outstanding at the close of the year was £2,510,309. The advances made during the year were chiefly for the relief of agriculturists, but partly for the improvement of land and for loans to co-operative credit societies.

The progress of the land revenue will now be reviewed province by province. The figures are taken from the land revenue reports relating to the agricultural year, while those given above are from the corrected Accounts of the Government of India, and relate to the financial year.

**Bengal.**—The land revenue of Bengal remains fairly constant, as most of the province is under permanent settlement. The revenue demand for 1912–13, excluding arrears, amounted to £1,806,944, including £1,441,661 from 91,458 permanently settled estates, £102,055 from 3,001 temporarily settled estates, and £263,228 from 2,212 estates under the direct management of Government. The percentage of total collections on total demand (including arrears) was 96·29 per cent. Remissions were trifling. The number of estates, &c. which became liable to sale for non-payment of Government revenue fell to 9,895, of which only 920 were actually sold. Under the Public Demands Recovery Act, 69,677 certificates were filed for recovery of arrears of revenue (exclusive of cess), compared with 43,556 in 1911–12; payment was generally secured on issue of notices or on attachment of property, but actual sale was necessary in 1,484 cases, and warrants were issued in 798 cases, 24 defaulters being imprisoned. Advances under the Loans Acts amounted to £6,127.

**Bihar and Orissa.**—The total current demand was £995,073, viz., £710,449 from permanently settled, and £172,381 from temporarily settled estates, and £112,243 from estates held by Government. The percentage of total collection on total demand (including arrears) was 96·93. Proceedings under the sale laws included 428 sales (out of 9,279 estates which became liable to sale), while under the Public Demands Recovery Act, 34,195 certificates (excluding those for cesses) were filed; in 1,556 cases recourse to sale was necessary, and 12 persons were imprisoned. Advances under the Loans Acts amounted to £16,044.

* Mostly from Bombay. † Mostly from Punjab. ‡ Mostly from Burma.
§ From Bengal and Eastern Bengal and Assam.

**(Collection of the Revenue.)**

**Assam.**—Land revenue demand (current) was £475,346, of which 96·05 was realised. Demand notices were issued to 60,842 persons; sales were effected in 878 cases. Advances amounting to £17,866 were made under the Agriculturists' Loans Act, chiefly to persons in the Lushai Hills. No advance was made under the Land Improvement Act.

**United Provinces.**—The current land revenue demand in 1911–12 was £4,326,667. About £11,500 was remitted or suspended, and the collections were short of the demand by only £456. Other sources of revenue, not strictly classed as land revenue, are the occupiers' rate (receipts, £506,501) and the owners' rate (receipts, £11,052), which constitute payments for irrigation, besides cesses, &c. The collections on account of canal rates rose considerably owing to the drought in the early part of the 1911 monsoon. Advances under the Loans Acts amounted to £192,899—a large increase, due to a large demand for funds to purchase cattle and seed for *Rabi* sowings. Advances for permanent improvements increased owing chiefly to expenditure on wells; advances were also made for sugar factories. The outstanding principal was reduced during the year. The number of coercive processes continued to decrease owing to the continued prosperity: but the successful efforts to suppress the illegal methods of recovery in vogue up to 1905–6 has led to a great increase in the clerical work of Tahsil staffs. In 1911–12, 2,396 writs of demand were issued and there were 5,273 attachments of property.

**Punjab.**—The fixed land revenue demand stands at £1,418,477—a decrease since 1911–12 due to the exclusion of the Delhi enclave; 97·3 of the current demand was collected. Re-assessment of canal areas has yielded a considerable increase of "fluctuating" land revenue, the demand for which varies with the crop. There was a decrease in receipts from sales of Government estates, as the greater number of Lower Chenab colonists had exercised their option of purchase in the previous year. Coercive processes numbered 10,064. Loans under the Acts amounted to £50,466. A proposal to legalise Takavi advances to co-operative credit societies has been negatived. It is, however, proposed to utilise the agencies of these societies for the distribution of such loans—a course to which there is no legal objection.

**North-West Frontier Province.**—In 1911–12 the fixed Land Revenue demand amounted to £123,856, of which 99·07 per cent. was collected. Fluctuating assessment is in force in one district only. Writs and warrants numbered 1,565, a decrease as compared with 1910–11. Advances amounted to £17,671.

**Central Provinces and Berar.**—In the Central Provinces the current land revenue demand was £642,727, an increase over 1911–12 due mainly to new settlements; in Berar it was £607,785. Save for remissions it was collected in full. Advances to agriculturists amounted to £38,731. Demand notices numbered 1,641, resulting in one imprisonment and nine sales. Miscellaneous land revenue increased by over £5,000, chiefly owing to increased receipts from manganese royalties.

**Burma.**—The land revenue demand rose to £1,878,300, being £138,000 more than in 1911–12, the rise being due to an exceptionally prosperous year and also to revised assessments in some districts. In only five districts was there a decrease. Remissions amounted to £12,100 only. There was a great decrease in coercive processes, warrants of arrest and of attachment being 30 per cent. fewer than in 1911–12. Coercive measures were undertaken in respect of revenue amounting to £49,600, of which 80 per cent. was recovered. Besides land revenue proper, several minor heads are included under land revenue—the capitation tax levied in Lower Burma (amounting in 1912–13 to £368,500), *Thathameda* or household tax in Upper Burma (amounting to £251,300), fishery revenue (£204,300), and miscellaneous (£271,500). The number of persons assessed to capitation tax and *Thathameda* was about 1,371,000 and 828,000 respectively, as against 1,350,000 and 817,000 in 1911–12. Of the miscellaneous revenue £221,100 was from petroleum royalties—a record figure.

**Madras.**—The total current demand, including cesses, water-rates, miscellaneous, &c., was £5,006,946, of which £332,356 was from permanently settled estates and the greater part of the rest from Ryotwari land. A generally favourable season and the introduction of enhanced assessments in certain districts caused an increase over 1911–12. Remissions granted on account of the season fell from £70,682 to

£21,816. Current collections amounted to 98·8 per cent. of current demands. The number of coercive processes continues to decrease. In 1912–13 1,113,240 demand-notices were issued, and the number of sales was 1,973.

**Bombay and Sind.**—The aggregate demand was £2,996,879, and of this 99 per cent. was collected. The result of a favourable season following one of scarcity was specially apparent in the Northern Division, where both demand and collections doubled. Advances to cultivators fell for the same reason from nearly £500,000 to £180,359. The "Joint Bond" system of granting Takavi advances has been eminently successful in securing prompt repayment.

## Wards' and other Estates.

**Wards' Estates.**—Courts of Wards have been established in most of the larger provinces. Primarily intended for the protection of the Government revenue, they are also beneficial to the interests of the owners, and recent changes in the law have been largely made in the owners' interests. Before 1899, the Courts had power to assume the management of estates of minors, of persons physically or mentally incompetent to manage their own property, or of persons declared by the local Government, at their own request, to be disqualified for its management. Since that year various amending Acts have been passed in the several provinces conferring on Government further powers of putting estates under the control of the Courts without consent of the owners when the latter are in a special degree unqualified for their proper management. In other respects the general effect of the new Acts is to increase the powers of the Court of Wards with regard to the management of the properties under its charge and the discharge of encumbrances, and to prevent disqualified proprietors from creating new charges without the knowledge of the Court. The duty of the Courts is to manage the estates under their charge in the interests of both proprietors and tenants; to support the family of the proprietor, and to educate young wards; to pay off debts due by the estates; and to spend the surplus income on the improvement of the property in the best attainable way.

At the end of the last agricultural year for which complete figures were available there were 764 estates under management in the eight provinces that have Courts of Wards. The gross income of the estates was about £3,000,000.

**Other Estates.**—In Bengal there were 2,212 Government estates under direct management, with a current revenue demand of £263,228. In Bihar and Orissa there were 274 Government estates under direct management, paying an annual revenue of £112,243, at the close of 1912–13. In the United Provinces the number of Government estates at the end of 1911–12 was 614, most of them being properties bought in under the Bundelkhand Encumbered Estates Act. In Bombay proper at the end of 1912–13 there were 640 estates under the management of the Talukdari Settlement Officer, and 273 encumbered estates under a special manager in Sind.

(Salt.)

# CHAPTER V.

## REVENUE FROM TAXATION AND OPIUM.

| | |
|---|---|
| SALT. | CUSTOMS. |
| EXCISE. | INCOME TAX. |
| PROVINCIAL RATES. | REGISTRATION. |
| STAMPS. | OPIUM. |

*(For further details see Statistical Abstract for British India, Tables 43, 45 to 47, 50 to 58, and 61 to 66.)*

Of the eight heads of revenue dealt with in this chapter, seven comprise the tax revenue of India, and furnish about 43 per cent. of the total net revenue of the Indian Government. To this the chief contribution is made by excise, the yield of which has increased in recent years, mainly on account of higher rates of duty and stricter supervision. Next come customs and stamps, both of which have benefited by the great progress in trade and industry. The salt revenue has diminished, owing to reductions, amounting to 60 per cent., in the rate of duty since March 1903. Receipts from income tax and registration are increasing.

## Salt.

**General.**—From time immemorial a tax on salt has been a source of revenue in India. The salt revenue is now raised by a duty on all salt imported into, or manufactured in, India. The general rate of duty, which stood at Rs. 2½ per maund (about ½*d.* a pound) from 1888 to 1903, was reduced to Rs. 2 in 1903, to Rs. 1½ in 1905, and finally to Re. 1 in 1907. The rate in Burma, for imported salt, was at the latter rate throughout. This rate is therefore now universal, save for locally-produced salt in Burma (which, till 1911, paid 8 annas, and now pays 12 annas per maund), and certain other insignificant exceptions. Exemption from duty is granted under certain conditions for salt used in manufacturing processes. The reductions in duty from 1903 to 1907, and increased facilities for transport, have made salt cheaper than ever before, and greatly enhanced consumption, though not sufficiently so to make good the sacrifice of annual revenue. The table shows approximately the consumption of salt for 1902–3 (the last year of the unreduced duty) and for the five years ending 1912–13. It includes figures for Burma, which are partly estimated. It also shows the gross revenue.

| Year. | Issues of Salt in 100,000 Maunds. | Gross Revenue in 000 £. |
|---|---|---|
| 1902–3 | 374 | 6,184 |
| 1908–9 | 461 | 3,276 |
| 1909–10 | 465 | 3,320 |
| 1910–11 | 461 | 3,176 |
| 1911–12 | 482 | 3,391 |
| 1912–13 | 480 | 3,334 |

The revenue in 1912–13 decreased to £3,334,374, of which nearly 30 per cent. was derived from imported salt. The charges amounted to £374,008, exclusive of £245,228 paid under treaties in the form of compensation, principally to Native chiefs who have assigned their salt sources to the Government of India.

Salt affairs in Upper India are controlled by the Northern Indian Salt Department, which is under the direct administration of the Government of India. The maritime local Governments have their own salt departments. As regards Bihar and Orissa, Bihar is under the Northern Indian Salt Department, but Orissa has its own.

The principal sources of salt supply are the sea coast, especially in Madras and Bombay, where salt is manufactured by the evaporation of sea water; the salt lakes and pits of Rajputana; the salt mines of the Punjab and North-West Frontier Province; and importations from abroad, which supply most of Bengal, Assam, and Burma. The duty is levied on salt at the place of manufacture, or at the port of importation, before it passes into consumption. Some of the salt sources belong to, or are worked under the direct control of, the various local governments; others are owned or leased by private individuals. The salt supply of India is not, therefore, a Government monopoly, and the importation of salt is unrestricted. Manufacture is not allowed where the circumstances are such as to render proper collection of the duty impracticable, as, for instance, on the coast of Bengal.

(Salt.)

**Northern India.**—The salt sources under the control of the Northern India Salt Department comprise: (1) the Rajputana sources, including the Sambhar Lake and the brine springs at Pachbadra and Didwana in the Jodhpur State; and (2) the Punjab sources, including the Mayo, Warcha, and Kalabagh mines, the Kohat mines, the Mandi mines, and the brine springs at Sultanpur. The most important sources are the Sambhar Lake and the Mayo mine. The Sambhar salt is sold at a uniform price of 4 annas per maund, with a charge of 3 pies for clearance. Didwana and Pachbadra salt for somewhat less. Mayo salt is sold for 14 pies per maund. Kohat salt, on the average, costs about 9½ pies. Since 1870, when the Sambhar lake was leased by the Government of India, over 162 million maunds of salt have been taken from it, and the financial results show a total credit balance of over £290,000. In 1912–13 the outturn of the lake rose from 1,420,520 maunds to 2,262,548 maunds; the sales amounted to 4,722,674 maunds. The sales from the Mayo and other Punjab mines amounted to 3,492,922 maunds. The gross revenue of the Northern India Salt Department in 1912–13 was £778,121, or £24,976 more than in 1911–12, while the total charges amounted to £77,601. The total quantity issued by the Department for consumption was 10,297,232 maunds, as compared with 10,071,098 maunds in 1911–12. The following table shows the consumption and prices in provinces and states mainly supplied by the Department:—

| Province or State. | Total Consumption. | Average Retail Price per Maund. | | Average Consumption per Head. |
|---|---|---|---|---|
| | | 1911–12. | 1912–13. | |
| | Maunds. | Rs. A. P. | Rs. A. P. | Lbs. |
| North-West Frontier Province | 566,433 | 1 8 7 | 1 8 7 | 7·36 |
| Punjab | 2,880,815 | 1 10 0 | 1 9 11 | 9·16 |
| United Provinces | 4,212,549 | 2 1 0 | 2 0 11 | 9·94 |
| Bihar | 223,066 | 2 2 3 | 2 2 1 | 11·04 |
| Central Provinces and Berar | 276,473 | 2 7 4 | 2 6 4 | 11·98 |
| Rajputana | 1,172,627 | 1 14 3 | 1 14 8 | 9·92 |
| Central India | 871,335 | 2 0 7 | 2 0 7 | |

The average retail prices were thus lower in 1912–13 in most of the provinces and States enumerated. The annual figures of consumption represent the difference between the estimated supply (including imports into) and the exports from each territory, and are liable to be vitiated by the existence of stocks.

The Department issued 45,912 licences for the manufacture of saltpetre and other saline substances in 1912–13. The refineries produced 488,585 maunds of refined saltpetre.

The number of persons arrested for offences against the salt law was 323, of whom 178 were released. Of 133 persons convicted 15 were imprisoned.

**Bengal.**—The salt consumed in Bengal is imported from abroad or from other parts of India. In the littoral districts salt production is prohibited, owing to the difficulty of preventing illicit manufacture. The quantity of salt imported in 1912–13 was 14,669,306 maunds, as against 14,317,055 in 1911–12. The average wholesale price of salt, including duty, at the chief marts of Bengal was about Rs. 2.1.9. per maund, as compared with Rs. 2.1.11 in 1911–12. The average retail prices in the saliferous tracts (for which alone information on this point is given) varied, as in previous years, from 9 to 15 pies a seer. The net amount of salt consumed in the province rose to 7,642,905 maunds. The number of persons convicted of offences against the salt law was 6, as against 4 in 1911–12; there has been a considerable decrease in these offences of late due to wide distribution of shops for the sale of licit salt, systematic patrol, and the better condition of the people. The imports of salt from the United Kingdom continued to decline relatively to the total imports of the province.

**Orissa.**—There is no direct import of foreign salt into Orissa; the total quantity imported from other parts of India (chiefly Madras) was 1,419,948 maunds, as against 1,126,179 in 1911–12. The consumption was 9 seers per head; the average wholesale price for the entire province of Bihar and Orissa was Rs. 2.3.1 per maund, as against Rs. 2.3.0. in 1911–12. The number of persons convicted for offences was 14, as against 6 in 1911–12.

**(Salt.)**

**Madras.**—There are two systems of salt manufacture in Madras, under one of which the salt is manufactured by Government, whilst under the other the Government levies an excise duty and allows the manufacturers to make such arrangements as they please for the disposal of the salt. Of the 65 factories worked during 1912–13, 45 were under private and 20 under Government management. The outturn of salt reached the record figure of 13,186,465 maunds, of which 8,219,441 maunds were "excise" salt. The imports by sea and rail, chiefly from Bombay and Goa, amounted to 1,740,162 maunds. Excluding the salt sold for fish-curing and to the French Government, or exported, the total of salt for consumption was 11,270,811 maunds. The average consumption per head was 19·38 lbs. in the whole Presidency, including Coorg and Mysore, and other Native States (except Travancore and Cochin), as compared with 19·1 lbs. in 1911–12. The average wholesale price of "excise" salt was 2 annas 10·9 pies per maund, as against 3 annas 0·7 pies in 1911–12. Government salt is usually sold at a fixed rate of 3 annas per maund. The retail prices, including duty, varied from Re. 1.6.1 to 2.8.0 per maund, against Re. 1.6.0 to 2.8.3 in 1911–12. There has been an almost continuous decline in offences against the salt laws, ascribed chiefly to the lower price of salt and to the deterioration of saline soils.

At the end of 1912–13, 126 bonded yards were open for curing fish under special regulations, whereby cheap salt is sold to fish-curers. The quantity of fish brought to be cured rose to 1,477,670 maunds, and 809,808 maunds of cured fish left the yards fit for consumption.

**Bombay.**—The salt supply of Bombay comes from the Pritchard salt brine works, owned by the Government (Baragra salt), from sea-salt works on the coast, and from abroad, chiefly from Goa. The 429 sea-salt works excepting one, at Dharasna, worked by the Government are owned by, or leased to, private individuals. The bulk of the Baragra salt is exported to the United Provinces, the Central Provinces, and Central India; while the Madras Presidency and its States, Hyderabad, Mysore, Calcutta, and the Central Provinces, take large amounts of sea salt, The conditions of the year were favourable. The marginal table shows the issues of salt from each source in 1912–13. The consumption per head was 12·7 lbs., as against 13·2 lbs. in 1911–12.

| — | Total Issues. | For Local Consumption. |
|---|---|---|
| | Maunds. | Maunds. |
| Baragra salt - | 2,755,898 | 594,421 |
| Sea salt - | 9,479,334 | 2,580,405 |
| Imported salt - | 353,062 | 253,391 |
| Total - | 12,588,294 | 3,428,217 |

The average price has remained pretty constant throughout the Presidency. The number of offences rose from 105 to 159, but they were mostly of a very trivial kind.

Thirty-one fish-curing yards were open at the end of the year. Owing to a bad season, the quantity of fish brought to be cured in bond fell from 248,332 to 217,668 maunds and the quantity of cheap salt issued to fish curers from 74,454 to 62,824 maunds. There is a steady increase in refunds of duty for salt used in factories.

**Sind.**—The Sind salt supply is derived chiefly from the sea-salt works at Maurypur, and in smaller quantities from salt deposits at Saran and Dilyar on the edge of the desert, and from importation. The quantity consumed during the year was 461,925 maunds. The consumption per head fell from 10·59 lbs. in 1911–12 to 10·52 lbs. in 1912–13. The average wholesale price was Re. 1.14.6, and the average retail price Rs. 2.2.4. Salt offences fell from 65 to 27.

**Burma.**—One rupee per maund is levied on salt imported into Burma. All salt locally manufactured formerly paid an excise duty levied by a composition rate on vessels used for boiling brine; but a system of levying duty on actual output has now been introduced into all districts where any large quantity is produced, and has proved financially successful. As the result of an inquiry into the salt industry, it was decided to suppress the manufacture where it is of slight proportions, to concentrate it wherever it is continued, to combine the Salt with the Excise Department, and to enhance the excise duty by 25 per cent. The latter two changes have now been effected, the local industry has proved itself well able to support the enhanced duty, and it has been decided to enhance it 20 per cent. further. The other changes are being introduced gradually. The total estimated consumption of the province amounted to 2,361,816 maunds in 1912, as against 2,564,167 maunds in 1911. The local output was 839,653 maunds, as against 714,185 maunds in 1911; imports fell from 2,102,895 maunds to 1,740,166 maunds. The local product, which had previously shown a falling-off, has thus begun to reassert itself, and formed 28·6 per cent. of the total consumed. There were 48 convictions for illicit practices.

## Excise.

Excise revenue is derived from the manufacture and sale of intoxicating liquors, opium, and other drugs—principally hemp.

The declared policy of Government with regard to alcohol is to minimise temptation for those who do not drink, and to discourage excess among those who do. For this purpose it is endeavoured to make the tax upon liquor as high as possible without stimulating illicit practices or driving people to substitute deleterious drugs for alcohol or a more for a less harmful form of liquor.

The whole question of excise administration as regards alcohol was reviewed by a committee in 1905,* whose recommendations included advances in taxation in many cases, the further concentration of distillation, the extended adoption of the contract distillery system, and improvements in the preventive and other establishments employed. Fresh legislation with a view to carrying into effect the recommendations of the committee has been undertaken, and has been by this time enacted, in most provinces. The subject has recently been reviewed at length by the Government of India and Local Governments, and papers on the subject will shortly be published.

The contract distillery system above referred to has now been adopted for the greater part of India. Under this system the monopoly of supply of a given area is given out on contract, the contractor issuing his liquor at the rate of still-head duty in force, and supplying vendors at a fixed rate determined by tender over and above this duty, while the right of retail vend is sold, usually by auction, up to a sanctioned number of shops. In the Punjab a rather different system prevails, based on competition between a limited number of licensed distilleries, and in certain districts, mostly inaccessible, the old "outstill" system prevails. Otherwise the whole of India is gradually being brought under the contract system. By this system the dangers of unrestricted competition for the supply of liquor, and the attendant difficulties of proper supervision are avoided, while the largest possible proportion of the monopoly profits, both on wholesale and retail supply, are secured to Government. The danger of high vend-fees and low still-head duties is that this gives a wide margin of profit per gallon for the retailer and leads him to push sales. On the other hand a high still-head duty is only practicable when there is adequate security against illicit distillation. Thus as the preventive system becomes more efficient, the weight of taxation is transferred from vend-fees to still-head duty.

There has been a large and continuous reduction of spirit shops in the chief provinces. Under orders passed in 1907 by the Government of India, Local Advisory Committees have been formed in a number of municipalities—many with non-official majorities—whose recommendations as to withdrawals of license or change of site are almost invariably acted upon. Where such committees do not exist, other steps are taken to obtain public opinion on those matters.

Fermented liquors are taxed mainly by means of licenses for manufacture and retail trade. In Madras and Bombay a fixed tax per tree is levied on trees from which toddy is extracted. Spirits and beer manufactured in India on European lines are taxed at the same rate as the customs duties on similar liquors imported from abroad.

Opium, which is a common form of household drug, is usually taken in the form of pills or dissolved in water. Opium smoking is not extensively practised among Indians; it is subject to legal restrictions which are being made more stringent according to the policy announced by the Government of India in August 1912 in pursuance of a resolution on the subject passed by the Shanghai International Opium Commission of 1909. The Excise Revenue on opium is chiefly derived from duty and vend-fees. Hemp cultivation is restricted and controlled, and here again a duty and vend-fees are levied. Charas—the most deleterious form of hemp drug—is in some provinces subject to special restrictions.

The considerable growth of the Excise Revenue in recent years is due largely to higher rates of duty and stricter excise control, and does not indicate a corresponding increase of consumption, although an increase has occurred through the expansion of population and the greater prosperity of certain classes.

During 1912–13 the above-mentioned normal causes of growth of revenue were aided by a generally prosperous season, and by the growing reconciliation of consumers to "contract" spirit, which is usually at first regarded with suspicion when an "outstill" area is converted into a contract area. On the other hand,

* For the Report of the Committee, and for the orders passed by the Government of India thereon, *see* Parliamentary Papers Cd. 3327 and 3816, and House of Commons Papers 142 and 209 of 1907.

**(Excise.)**

temperance movements are reported from many parts of the country, which are having, in some cases, a very appreciable effect.

In most provinces Excise Intelligence Bureaux have now been started for the dissemination of intelligence as to offences against the Excise Acts.

The following table shows the excise revenue for 1911–12 and 1912–13 under the different heads, as given in the Finance and Revenue Accounts :—

| Year. | Licence and Distillery Fees and Duties for the Sale of Drugs and Liquors, | | | | | Other Duties, &c. on Indian Consumption of | | Fines, Confiscations, Miscellaneous. | Total Revenue. | Charges. | Net Revenue. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Foreign Liquors, &c. | Country Spirits. | Toddy and Pachwai. | Opium and its Preparations. | Other Drugs. | Opium. | Ganja, &c. | | | | |
| | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| 1911–12 | 312,329 | 4,171,303 | 1,296,334 | 302,054 | 454,365 | 748,514 | 299,130 | 25,724 | 7,609,753 | 419,253 | 7,190,500 |
| 1912–13 | 312,154 | 4,534,745 | 1,396,188 | 330,368 | 505,531 | 868,296 | 303,173 | 27,464 | 8,277,919 | 428,571 | 7,849,348 |

| | £ |
|---|---|
| 1893–4 | 3,971,000 |
| 1903–4 | 5,291,000 |
| 1909–10 | 6,837,000 |
| 1910–11 | 7,423,000 |
| 1911–12 | 8,015,000 |
| 1912–13 | 8,689,000 |

A sum of £839,831 was yielded by customs duties on exciseable liquors imported into India during the year. The revenue from liquors and drugs (*i.e.*, total excise revenue less charges, *plus* customs duties on exciseable liquors) for 1893–4, 1903–4, and the last four years is given in the margin. In 1912–13 it amounted to about 8½*d.* per head of the population affected.

The number of retail shops and the excise receipts, as compared with the population, are shown in the following table, province by province :—

| PROVINCE. | Population of Excise Area. | Number of Persons per Retail Shop licensed in 1912–13 for the Sale of | | | | Net Excise Receipts per 10,000 of Population in Rupees. |
|---|---|---|---|---|---|---|
| | | Country Spirit. | Country Fermented Liquor. | Opium and its Preparations. | Narcotic or Intoxicating Drugs, other than Opium. | |
| Bengal | 45,329,247 | 35,220 | 13,379 | 50,874 | 20,870 | 2,903 |
| Bihar and Orissa | 34,490,084 | 16,518 | 4,300 | 61,261 | 20,110 | 2,860 |
| Assam | 6,622,431 | 35,226 | 287,932 | 16,473 | 25,668 | 7,153 |
| United Provinces | 47,182,044 | 9,950 | 15,608 | 43,128 | 13,625 | 2,524 |
| Punjab | 19,946,369 | 25,089 | 30,815 | 22,113 | 36,465 | 3,188 |
| North-West Frontier Province | 2,251,292 | 60,845 | — | 32,161 | 30,017 | 1,337 |
| Burma | 10,534,808 | 81,037 | 9,595 | 84,958 | — | 6,671 |
| Central Provinces and Berar | 13,916,308 | 3,747 | 28,228 | 13,317 | 12,605 | 7,285 |
| Madras | 41,430,193 | 4,615 | 2,744 | 48,678 | 76,997 | 7,535 |
| Bombay | 16,113,051 | 7,622 | 835 | 20,500 | 28,169 | 11,071 |
| Sind | 3,513,435 | 13,778 | 878,358 | 13,997 | 6,943 | 6,066 |

The marginal tables attached to the following accounts of excise administration in the different provinces give the total excise revenue for 1911–12 and 1912–13 according to the departmental returns. In some cases the issues of drugs to Native States are included :—

**Bengal.**—The contract distillery was everywhere in force during 1912–13, save in Dacca and Chittagong Divisions, and has since been introduced in these. Enhancements of duty on country spirit have been sanctioned, with effect from April 1913, practically throughout the Presidency. The settlements for licence fees for 1913–14 were also considerably higher than those made for the previous year.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Country spirits | 412,110 | 427,346 |
| Foreign liquors and rum | 36,898 | 38,158 |
| Fermented local liquors, toddy, and rice-beer. | 84,168 | 86,384 |
| Opium | 150,753 | 158,421 |
| Hemp drugs | 206,238 | 204,672 |
| Miscellaneous | 2,480 | 2,296 |
| Total | 892,647 | 917,277 |

The total consumption of spirits from central distilleries was 851,534 gallons, as against 796,784 in 1911–12. The increase is attributed to good harvests and trade, and to the low licence fees of 1912–13, which enabled vendors to reduce the retail price. A marked increase in Calcutta is partly due to the displacement of imported spirits by country spirit. Calcutta now contributes almost one-half of the total revenue from country spirits.

In 18 large towns, including Calcutta, local committees were appointed to advise collectors as to the abolition or alteration of sites of liquor shops. In all 26 shops were abolished or removed to other sites.

Opium consumption showed a slight increase; this may represent smuggling to Burma, though the restriction of issue to retail shops in certain districts tends to prevent this. In accordance with the recommendations of the International Opium Commission of Shanghai the limit of retail sale and possession was reduced from 5 to 3 tolas.

There was a decrease in the consumption of *ganja*, due to an enormous decrease in Calcutta, the result of enhanced licence fees and consequent high prices. The duty has been raised, with effect from April 1913.

Energetic measures were taken to check the growing cocaine habit. 5,438 ounces of cocaine were seized in Calcutta during the year, and 748 persons were convicted in Bengal for illicit sale and possession of cocaine. The habit, however, does not seem to have spread beyond the neighbourhood of Calcutta.

**Bihar.**—The out-still system at the end of 1912–13 was still in force in considerable areas of Chota Nagpore and Orissa, and in parts of Bihar; but since the end of the year under review the conversion of all these areas into contract areas either has been effected or is contemplated, save for certain tracts in Orissa, which are not yet ripe for such conversion. Consumption of contract spirit rose from 1,080 thousand to 1,158 thousand gallons, the increase being most marked in Bhagalpur, where the contract system has been some years in existence and people are getting used to the contract spirit. Licence fees rose considerably—a proposal for a general revision of rates of duty is under consideration. Nineteen towns have Licence Advisory Committees. Temperance movements have been initiated among several castes with a view to improving the status of the members. The number of tari shops in Bihar was pronounced excessive by the Excise Committee of 1905–6, since when there has been a large reduction. The total number of such shops in the province was reduced by 768 during the year. The sale, however, of tari has been stimulated by the increase of the price of spirits under the contract system. Pachwai or rice beer may be brewed for home consumption duty-free by certain aboriginal tribes. The consumption of hemp-drugs decreased, that of opium increased, the apparent increase being largely due to the displacement of illicit by licit consumption. Nearly 100 opium shops were abolished, and other measures taken to check the smuggling of opium. Opium smoking prevails among the low class Mahomedan population of certain towns, and strong measures are contemplated for its suppression. The spread of cocaine too is causing disquietude; there were 86 convictions during the year for offences connected with cocaine.

| Gross Receipts from— | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Country spirits | 341,090 | 360,449 |
| Fermented liquors | 88,023 | 93,130 |
| Opium | 78,708 | 81,030 |
| Other drugs | 147,713 | 153,697 |
| Other liquors and miscellaneous | 3,569 | 5,066 |
| Total | 659,103 | 693,372 |

The occurrence during the year of the Car Festival at Puri has had a certain effect on the excise figures.

**Assam.**—Duties on spirits and *ganja* were raised and, in four districts, the Treasury price of opium. The contract supply system prevails in almost all the plain-areas. Consumption of spirit in contract areas rose from 238,947 gallons to 247,363 gallons, owing to the growth of the immigrant population and the prosperity of the tea industry. In spite of the enhancement of the price of opium, consumption increased. It is reported that coolies in some gardens are taking to it. Further restrictions have been placed on the sale and possession of opium.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Country spirits | 81,032 | 93,824 |
| Opium | 168,157 | 182,554 |
| Other drugs | 45,923 | 45,836 |
| Other liquors and miscellaneous | 1,149 | 1,255 |
| Total | 296,261 | 323,469 |

(Excise.)

**United Provinces.**—There was an increased consumption under all heads owing to good harvests and general prosperity, a favourable season for Hindu marriages, and the growing reconciliation of the people to the contract system. Compared, however, with figures for previous periods of prosperity, the present increase of consumption is thought to be less than would be justified by the great economic improvement of the consuming classes, and there is no evidence that the alcoholic habit has strengthened its hold on the community. Out-stills now exist only in a few border tracts. The consumption of contract spirits rose from 1,538 to 1,690 thousand gallons, despite enhancements of stillhead duty in part or all of 11 districts. It has been enhanced in 18 more districts since the close of the year under review. Duty on charas was heavily enhanced. Opium consumption rose slightly. There is an undoubted decrease in the amount smuggled to Calcutta. The limit of possession of prepared opium was reduced from 1 tola to ½ tola to check opium smoking.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Country spirits - - | 494,112 | 560,426 |
| Foreign liquors and rum - | 21,143 | 17,606 |
| Fermented liquors - - | 19,304 | 22,102 |
| Opium - - - - | 74,541 | 79,946 |
| Other drugs - - - | 133,823 | 160,406 |
| Miscellaneous - - - | 527 | 649 |
| Total - - | 743,450 | 841,135 |

Eighteen excise shops were closed on the recommendation of local advisory committees. From various quarters come reports of temperance movements.

Special attention was paid to cocaine smuggling, and 142 cases were instituted.

**Punjab.**—The outstanding feature of the year was the fact that, though the revenue from country spirits increased, the consumption decreased by 5 per cent. The increase in revenue is almost entirely under licence fees, as people are prepared to pay more for these now that it is known what large profits can be got out of the trade. At present licence fees form a disproportionately large part of the revenue from country spirits, but, in view of the widespread illicit distillation known still to take place, it is impossible to raise the still-head duty till the preventive staff are in a better position to cope with the illicit trade. The new Excise Bill (which passed into law after the close of the year under review) with its enhanced penalties, should have the desired effect. The extension is contemplated of the system of advisory committees, but there is not thought to be much scope for the further reduction of licences. The smuggling of spirits from native states is becoming a serious feature. Temperance societies are doing much good, especially in the Sikh districts. Issues of opium increased, probably rather owing to increased smuggling to Calcutta and Burma than to increased consumption in the provinces. The duty was increased at the end of the year. Consumption of charas is decreasing owing to enhancement of duty in 1911. Here again, the duty was further increased at the end of the year.

| Gross receipts from | 1911–12. | 1912–13.* |
|---|---|---|
| | £ | £ |
| Imported liquors - | 12,806 | 13,422 |
| Fermented ,, - - | 19,431 | 16,030 |
| Country spirits - - | 271,333 | 277,491 |
| Opium - - - | 73,620 | 81,570 |
| Other drugs, &c. - - | 46,818 | 49,608 |
| Miscellaneous - - | 99 | 93 |
| Total - - | 424,107 | 438,214 |

* Figures for Delhi excluded since September 1912.

**North-West Frontier Province.**—The figures for country spirits do not include duty on spirits imported from distilleries in the Punjab which amounted in 1912–13 to £9,767. Sales of country spirit rose, but the incidence of consumption is still very small—one gallon per hundred persons per annum. The monopoly system of retailing opium was abolished in favour of the shop vend system with a view to reducing retail prices and thus checking smuggling from Afghanistan.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| Imported liquors, &c. - | 2,220 | 2,585 |
| Country spirits - - | 7,145 | 6,106 |
| Opium - - - | 6,579 | 7,057 |
| Other drugs - - | 5,111 | 8,475 |
| Miscellaneous - - | 1 | 3 |
| Total - - | 21,056 | 24,226 |

**Burma.**—The re-organisation of the combined Excise Opium and Salt establishments came into force in June 1912. Opium receipts rose by 20 per cent. (despite a decrease in the amount issued) owing to an increase in the standard price and the discontinuance, in certain districts, of the sale of foreign opium. There does not appear to have been any increase of opium smuggling (though an unsatisfactory state of things is reported from Rangoon), and there is a general idea that the taste for opium is declining in Burma. But the taste for cocaine seems to be increasing. The contract distillery system was extended, and was in force in 12 districts during the year. The total issue of the distilleries rose from 26,788 to 57,391 proof gallons. About 17,000 gallons of this increase was due to the extension of the contract area. The remainder was due chiefly to the replacing of illicit by licit spirit over large areas as the contract distillery system becomes established. There was an increase of imported liquors, especially of beer, which Burmans appear to drink medicinally. Native rice-beer also shows a continuous increase.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Imported liquors, &c. | 87,373 | 77,680 |
| Country spirits | 15,006 | 27,568 |
| Fermented liquors | 175,759 | 181,006 |
| Opium | 202,142 | 248,664 |
| Fines, &c. | 5,918 | 7,099 |
| Total | 496,198 | 542,017 |

The opening up of the country, owing to mining and rubber ventures, coupled with the special danger which stimulants possess for the Burman character, make the problem of restricting licit facilities for procuring stimulants without leaving the field open for illicit sources of supply, peculiarly difficult in this province.

**Central Provinces and Berar.**—The rise in revenue is due to a succession of good harvests and to a steady improvement of excise administration, which has rendered possible considerable enhancements of duty. While the consumption of country liquor has risen by 11½ per cent. (excluding districts converted from "Outstill" areas during the year), the receipts from duty thereon have risen by 20 per cent. There is now only one "Sadar" distillery left, while the "Outstill" area covers 20,580 square miles out of a total of about 100,000. Taxation is being transferred from license fees to duty, but cautiously, as the process tends to send up retail prices to a dangerously high level. The price of country spirit shows anyhow a strong upward tendency, with the beneficial result that spirit is being in some places displaced by the more wholesome toddy. Opium consumption is stationary, but it is suspected that opium smoking is spreading among the wealthy classes in certain districts. Ganja consumption decreased owing to increased duty and a poor crop. The number of country liquor shops was reduced by 98.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| County spirits and toddy | 451,646 | 526,209 |
| Opium | 111,138 | 128,569 |
| Hemp drugs | 42,040 | 49,309 |
| Miscellaneous, including foreign liquors | 2,664 | 2,913 |
| Total | 607,488 | 707,000 |

**Madras.**—In Madras the contract supply system has prevailed since 1901, and is in force everywhere, save in a few tracts. Despite the raising of duties on country spirits in several districts, the consumption increased from 1,628,178 to 1,773,673 gallons—a record for the Presidency. The increase is attributed to good harvests, the opening of fresh plantations, the occurrence of a large number of festivals, development of industries, and the suppression of illicit distillation. The number of spirit shops has been reduced by 400. Over nearly the whole of the Presidency a tree-tax is imposed on all palm trees tapped for fermented toddy. The amount of such toddy consumed rose from 106 to 108 million gallons. The tree-tax was enhanced in seven districts.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Imported liquors | 40,664 | 37,080 |
| Country spirits | 864,018 | 963,812 |
| Fermented liquors | 944,828 | 1,030,251 |
| Opium | 102,008 | 114,819 |
| Other drugs | 42,105 | 48,277 |
| Miscellaneous | 8,132 | 7,673 |
| Total | 2,001,755 | 2,201,912 |

The use of opium appears to be decreasing. In 1912–13, 39,527 seers were issued for consumption within the Presidency, as against 41,417 seers in 1911–12. This

(Excise.)

decrease is partly due to enhancement of issue price, reduction of number of licensed shops, and limitation of private possession. Consumption is highest in the North-East of the Presidency and in Madras Town. Issues of ganja increased owing to a favourable season and low selling prices.

**Bombay.**—The marginal table includes figures for Sind and Aden. The contract supply system now prevails throughout all the province except one district and parts of a few others. For selling licenses the fixed fee system has been substituted for auction as the general rule. The experiment has not yet had a sufficiently long trial to enable a final verdict to be arrived at. There are 19 advisory committees in Bombay proper, and the number of spirit shops was reduced by 34. Duty on spirits was raised in many districts, and this fact, together with poor crops in certain localities and the competition of less potent liquors, led to a decrease of consumption of country spirits—the retail sales for Bombay being 2,458,950 proof gallons as against 2,554,588 in 1911–12. Bombay now gets its excise opium from Ghazipur instead of Malwa opium; the change of system has resulted in a larger revenue for the year, though the consumption has decreased. The Abkari Act has been amended, and the more stringent rules which it now contains as to cocaine, together with the severer attitude of magistrates towards cocaine offences, has had a beneficial effect as regards the illicit hawking of that drug. The consumption of hemp has increased, and measures have had to be taken to discourage *charas*, which is now prohibited in all districts of Bombay except four. Repressive measures have also been taken in Sind. A temperance crusade is reported from Sukkur in Sind.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Imported liquors - | 25,987 | 26,114 |
| Country spirits - - | 1,026,071 | 1,066,198 |
| Toddy - - - | 132,564 | 133,161 |
| Opium - - - | 80,859 | 105,693 |
| Other drugs - - | 82,004 | 83,663 |
| Miscellaneous - - | 6,364 | 5,742 |
| Total - - | 1,353,849 | 1,420,571 |

## Provincial Rates.

Since 1904–5 many cesses levied under the head of Provincial Rates have been abolished. In 1907–8 a further reform was adopted by the exclusion from the Imperial accounts of the transactions of District Boards and of certain other local funds, which are raised locally, mainly for local purposes, and chiefly managed by local bodies. Where the revenues are under the orders of Government, the accounts have been absorbed in the Imperial or Provincial accounts. Where the income and expenditure are clearly under local control, the fund has been excluded, except in the case of funds specially created for local purposes and administered by Government officers in an *ex-officio* capacity. The revenue from Provincial Rates amounted in 1912–13 to £552,149, made up chiefly of the cess on lands levied in Bengal and Bihar and Orissa for roads, schools, &c., and of the appropriation by the United Provinces from local rates for the payment of rural police in the Agra province.

## Stamps.

The stamp revenue is derived from two great classes of stamps. Judicial or court fee stamps are provided for by the Court Fees Act (VII. of 1870), which imposes fees on plaints, petitions, and other documents, with specified exceptions, filed before civil, criminal, or revenue courts; non-judicial stamps by the Stamp Act (II. of 1899), which imposes duties on commercial transactions recorded in writing, such as conveyances, bonds, cheques, bills of exchange, receipts, and the like. The revenue from the former class increases with the growth of litigation, and that from the latter class with the development of trade and industry. In 1912–13 the revenue grew under both heads. The marginal table gives the gross stamp receipts for 1911–12 and 1912–13. Over one-fourth of the revenue is derived from Bengal.

| Gross Receipts from | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Sale of court fee stamps - | 3,259,034 | 3,373,681 |
| Sale of commercial and other stamps. | 1,486,112 | 1,620,433 |
| Fines and miscellaneous - | 69,983 | 75,001 |
| Total - | 4,815,129 | 5,069,115 |

## Customs.

Special import duties are levied on malt liquors, wines, spirits, arms and ammunition, salt and salted fish, opium, tobacco, and silver. The duties levied on alcoholic liquors were raised by the Indian Tariff (Amendment) Act of 4th March 1910 (No. VIII.). They are now: ale, beer, &c., 3 annas per gallon; liqueurs, perfumed spirits, &c., Rs. 13 per gallon; spirit used in drugs, medicines, or chemicals, Rs. 7:13:0 per gallon; other spirit, Rs. 9:6:0; sparkling wines, Rs. 3:12:0; and other wines, Re. 1:8:0 per gallon. Tobacco is dutiable at various rates, which were raised in 1910 but reduced again in 1911, the enhanced duties not having proved as productive as was expected. Salt is dutiable at Re. 1 per maund, and silver at 4*d.* per ounce. Petroleum pays 1½ annas per gallon, and iron and steel generally 7 per cent. *ad valorem*. General import duties, which had been abolished in 1882, and were re-imposed in 1894, are levied at the rate of 5 per cent. *ad valorem*. For as many articles as practicable tariff valuations are fixed, and these are revised from time to time, a general revision being made in December of each year. The chief articles on the free list are railway materials, machinery which is worked by power other than manual or animal labour, grain and pulse, living animals, coal, jute, raw cotton, raw wool, books, gold and unset precious stones. On the revival of general duties in 1894 cotton goods were at first exempted, but in December 1894 a 5 per cent. *ad valorem* duty was imposed on imported cotton goods and yarns, while an excise duty of equal amount was imposed on all yarns of counts above 20 spun at power mills in British India. In February 1896 the cotton duties were revised; all cotton yarns and thread, whether imported or manufactured in India, were freed from duty, while a uniform duty of 3½ per cent. *ad valorem* was imposed on all woven cotton goods imported from abroad or manufactured in India at power mills, the products of handlooms being exempted. A duty is levied on exported rice and rice-flour at the rate of 3 annas per maund of 82⅔ lbs. of unhusked rice (about 4*d.* per cwt.). Jute exports from Calcutta and Chittagong bear a small duty for the benefit of the town, and there is a trifling export duty on tea which goes to a committee representing the tea-trade; but the proceeds of these duties do not enter the Government accounts. The last of the countervailing duties imposed from 1899 onwards on sugar from certain countries were withdrawn in 1912.

The appended table shows the amount of the customs receipts in 1894-5 and 1895-6, when the changes above-mentioned took effect, and also those for the four most recent years:—

| | 1894-5. | 1895-6. | 1909-10. | 1910-11. | 1911-12. | 1912-13. |
|---|---|---|---|---|---|---|
| Sea Customs, import duty: | £ | £ | £ | £ | £ | £ |
| Arms, ammunition, &c. | 10,126 | 11,403 | 10,604 | 10,326 | 9,638 | 14,276 |
| Liquors | 406,355 | 440,669 | 697,275 | 798,909 | 825,067 | 831,764 |
| Petroleum | 213,118 | 270,782 | 308,371 | 402,222 | 496,729 | 463,526 |
| Cotton manufactures | 256,631 | 776,483 | 816,679 | 935,290 | 1,029,886 | 1,271,026 |
| Silver bullion and coin | 230,557 | 231,859 | 353,800 | 1,077,882 | 644,401 | 715,165 |
| Other metals | 135,078 | 168,641 | 301,888 | 349,266 | 337,952 | 350,440 |
| Sugar | 630,450 | 686,725 | 367,485 | 411,233 | 306,259 | 476,576 |
| Other articles | | | 1,005,397 | 1,324,593 | 1,373,307 | 1,521,049 |
| Export duty on rice | 594,017 | 609,581 | 680,098 | 851,076 | 885,865 | 962,720 |
| Miscellaneous | 6,694 | 1,770 | 22,972 | 22,741 | 26,890 | 33,551 |
| TOTAL Sea Customs | 2,483,026 | 3,197,913 | 4,564,569 | 6,183,538 | 5,935,994 | 6,640,084 |
| Land Customs | 15,884 | 13,397 | 25,988 | 27,432 | 33,871 | 36,933 |
| Excise duty on cotton manufactures | 6,897 | 40,632 | 264,068 | 281,772 | 320,300 | 371,077 |
| Miscellaneous | 10,773 | 18,672 | 16,321 | 18,485 | 19,107 | 18,200 |
| TOTAL NET CUSTOMS REVENUE | 2,516,580 | 3,270,614 | 4,870,946 | 6,511,227 | 6,309,272 | 7,066,294 |

The receipts from import duties in 1912-13 showed an increase, owing to the very great growth of trade. Heavy demands from Ceylon and the Far East account for the increased yield of the rice export duty.

## Income Tax.

The Income Tax Act (II. of 1886), applicable to the whole of India, took the place of local Acts under which various licences were required for the exercise of trades or industries. Its principal provisions are that all incomes from salaries and pensions or from interest on securities, if amounting to Rs. 2,000 per annum, shall pay 5 pies in the rupee (equal to 6¼*d.* in the £); that incomes less than Rs. 2,000 shall pay 4 pies (5*d.* in the £); that companies shall pay 5 pies in the rupee on their net profits; and that incomes under Rs. 2,000 derived from other sources shall pay according to a graded scale from Rs. 20 on an income of Rs. 1,000 to Rs. 42 on Rs. 1,999, and 5 pies in the rupee on incomes of Rs. 2,000 and upwards. All incomes of less than Rs. 1,000 (£66⅔) a year were exempted by an amending Act (XI. of 1903), which substituted that taxable minimum for the former limit of Rs. 500. The tax is not levied on incomes from land or agriculture. Military salaries of less than Rs. 500 a month (£400 a year) are exempt.

The gross revenue from income tax in 1912–13 was £1,742,393, as compared with £1,652,878 in 1911–12. The proportion or revenue derived from the different sources (shown in the margin) varies but little. The number of persons assessed to income tax is only a small fraction of the population, the total in 1911–12 being 288,938. A large proportion of the revenue is collected in Calcutta and Bombay. Income tax receipts have increased with the increase in profits and salaries resulting from commercial and industrial activity, as well as through improved administration.

| | 1912–13. |
|---|---|
| | £ |
| Ordinary collections | 1,350,959 |
| Government salaries and pensions | 308,512 |
| Interest on Government securities | 64,452 |
| Other items | 18,469 |
| | £1,742,397 |

## Registration.

**General.**—Offices exist in every district for the registration of documents, and for keeping copies thereof. *Ad valorem* fees are charged for registration, and a small fixed fee for searching the records. For registration purposes, documents are divided into (*a*) those the registration of which is compulsory, or necessary to the validity of the deed, and (*b*) those which are registrable or not at the option of the holder, though liable, if unregistered, to be superseded by registered documents, subject to the equitable doctrine of notice. In the former class are instruments of gift of immovable property, or other non-testamentary documents which affect rights in such property of a value of Rs. 100 and upwards, and, with certain exceptions, annual or longer leases. Optionally registrable documents include those relating to immovable property not comprised in the above-mentioned classes, deeds affecting movable property, wills, and other documents. As regards transfers of immovable property, however, the situation is affected, except in the Punjab and Upper Burma, by the Transfer of Property Act (IV. of 1882), as amended by Acts of 1885 and 1904. Under the provisions of the Act of 1904 the registration of mortgages of immovable property of a lower value than Rs. 100, previously optional, was made compulsory. Practically all deeds transferring immovable property have now, therefore, to be registered. Mortgages form the largest class of instruments registered. Documents relating to the sale, mortgage or lease of immovable property, compulsorily registrable, comprise the great majority of all registrations. The number of optional registrations has steadily declined, partly owing to the operation of the amending Act of 1904.

The gross registration receipts in 1912–13 were £482,022, as compared with £445,862 in 1911–12, and the cost of the registration offices was £246,532. Fluctuations in the work of registration, especially of mortgages and sales, may be due on the one hand to bad harvests, plague (which affects wills and deeds of gift), high prices, and declining credit, or on the other to settlement operations, the development of new lands, the growth of towns, the expansion of trade, &c.

In 1912–13 the number of registration transactions increased in every province. The normal growth of business was the chief factor; to this may be added settlement operations, actual or impending, in Bengal and Behar, high prices, rise in the value of land, building activity in towns, the acquisition of proprietary rights by peasants in Canal colonies, and—in Burma—the failure of the Bank of Burma, which has led people to invest in land rather than joint stock companies. Proposals to assimilate the Registration Law in Upper and Lower Burma are under consideration.

# Opium.

**General.**—The opium revenue was, during the year under report, raised partly by the levy of pass duty on opium exported from Native States to China, and partly by a monopoly of the production of the drug in an area now confined to certain districts in the United Provinces, where opium is grown for internal use in India and for export to those foreign countries or colonies where its use is permitted. Export to China has been discontinued since the beginning of 1913. The area sanctioned for opium cultivation, in the United Provinces in 1913-14 was about 167,000 acres, as against about 203,000 in 1912-13. The cultivator of opium (known as Bengal opium) in these monopoly districts must hold a licence, and is granted advances to enable him to prepare the land for the crop. He is required to deliver the whole of his outturn of crude opium at a fixed price to Government agents, by whom it is despatched to the Government factory at Ghazipur. The supply of prepared opium required for consumption in India, "excise opium," is made over to the Excise Department, and Rs. 8½ per seer is credited to opium revenue for the amount thus consumed. The chests of "provision" opium, for export, are sold by auction at monthly sales in Calcutta. The price obtained at the Calcutta sales, less the cost of production, is the revenue from Bengal "provision" opium. Opium (known as Malwa opium) is grown in Baroda and in some of the Native States of Rajputana and Central India. The Government of India interfere in no way with its production or local consumption; but Malwa opium may not pass into British territory, whether for export by sea or for consumption, without a pass, which is granted only on payment of a heavy duty. The duty on Malwa opium intended for export was raised at the beginning of 1912 from Rs. 600 to Rs. 1,200, and the right to export was put to monthly auction.

Towards the end of 1906 edicts were issued by the Chinese Government ordering that within 10 years the growth and the consumption of opium in China should be suppressed. In 1907 an agreement was made with China for an annual reduction of the total amount of opium exported by India; in 1911 it was further agreed that, of the annual exports thus limited, only a certain quantity, to be reduced annually, should be certificated for export to China, and provision was made for an earlier cessation of the export to China in the event of the native Chinese production being suppressed before the expiration of the period of 10 years. In 1913 the sale of opium thus certificated was suspended, and it has since been decided that the trade with China shall not be resumed.

The opium revenue and expenditure during recent years have been as follows:—

| | 1906-7. | 1907-8. | 1908-9. | 1909-10. | 1910-11. | 1911-12. | 1912-13. |
|---|---|---|---|---|---|---|---|
| Opium Receipts:* | £ | £ | £ | £ | £ | £ | £ |
| Sales of Bengal opium | 4,895,505 | 4,401,988 | 4,234,444 | 4,546,147 | 7,245,574 | 4,990,982 | 3,320,382 |
| Duty on Malwa opium | 553,788 | 620,480 | 1,398,780 | 724,140 | 8,720 | 693,274 | 1,473,310 |
| Excise opium, and miscellaneous | 211,235 | 222,518 | 251,564 | 264,396 | 267,668 | 277,022 | 330,900 |
| Total | 5,660,528 | 5,244,986 | 5,884,788 | 5,534,683 | 7,521,962 | 5,961,278 | 5,124,592 |
| Opium expenditure (chiefly in Bengal) | 1,913,292 | 1,669,441 | 1,236,088 | 1,110,155 | 1,246,657 | 729,452 | 599,729 |
| Net opium Revenue £ | 3,747,236 | 3,575,545 | 4,648,700 | 4,424,528 | 6,275,305 | 5,231,826 | 4,524,863 |

* Exclusive of the licence fees and duty on opium consumed in India, amounting in 1912-13 to £1,198,665 included under Excise.

**Bengal.**—The net area cultivated with the poppy in the Ganges Valley in recent years, excluding areas on which the crop failed, is shown in the margin, together with statistics of opium produced and sold for export. The year October 1911 to October 1912 was the first in which the Department was worked without making provision for the China trade. It was the second bad season in succession, and this, together with the general uncertainty of the industry, tended to render opium cultivation increasingly unpopular.

| Year. | Acres. | No. of Chests produced for Export. | No. of Chests Sold for Export. | Average Price in Rs. |
|---|---|---|---|---|
| 1909-10 | 354,577 | 29,000 | 42,300 | 1,612 |
| 1910-11 | 362,868 | 15,000 | 37,560 | 2,892 |
| 1911-12 | 200,671 | 14,000 | 26,330 | 2,790 |
| 1912-13 | * | * | 17,890 | 2,784 |

* Figures not available.

**(Opium.)**

**Bombay.**—Under the system introduced at the beginning of 1912 the right to export opium was to be sold monthly by auction. Between April and December 1912 seven such sales were held, in respect of 9,428 chests in all, of which 6,668 were for export in 1912 and the remainder for export in 1913. The receipts were £1,231,400 in addition to the pass duty of Rs. 1,200 per chest. Owing to the difficulty of delivering opium in China and the consequent congestion, bidding fell off. For the months January to March 1913 Government fixed a prohibitive upset price, and no bids were made. After March, sales were finally discontinued. Thus the year 1912–13 was virtually the last year of the administration of the Opium Department in the Bombay Presidency.

| | Chests Exported. |
|---|---|
| 1908–9 | 20,695 |
| 1909–10 | 13,192 |
| 1910–11 | 6,711 |
| 1911–12 | 14,036 |
| 1912–13 | 11,206 |

The revenue realised, after paying to the Native States the share of the profits due to them under the 1912 arrangement, was £1,469,000. The exports to China for the last five years are given in the margin.

# CHAPTER VI.

## AGRICULTURE.

The present chapter gives an account of the conditions prevailing in each province during the agricultural year 1912–13, together with some information regarding the outturn of agricultural produce and the progress of co-operative credit societies. An account of the working of the Agricultural and Civil Veterinary Departments is given in Chapter XIII.

## Seasbn and Crop Reports.

**Bengal.**—The rainfall on the whole was favourable, with the exception of heavy rains in Eastern Bengal in April, which retarded jute sowing; otherwise jute was, on the whole, good. Winter rice showed an improvement, but spring crops suffered. The total cropped area was 30½ million acres. Prices of food crops and jute ruled higher than in the previous year. Food stocks are reported to be sufficient. Wages are rising in many districts.

**Bihar and Orissa.**—Conditions were generally favourable till September, in which month and October there was a shortage of rain. Of the three crops of the year two suffered thereby; but the *rabi* harvest was good, and, owing to the plentiful harvest of the previous year, the stocks of food grains are reported to be well maintained. In parts of Angul and Sambalpur there was some scarcity, and *takavi* loans were granted, and relief works were started privately and by District Boards.

**Assam.**—Rainfall was generally above normal except in August, when there was a serious break. Excessive rain in the winter caused some floods and interfered with the cultivation and growth of jute. The weather was favourable to rice and oilseeds; the cropped area increased by 113,635 acres. Rice prices increased, despite a bumper crop, owing to the large demand outside the province.

**United Provinces.**—Both autumn and spring crops were endangered by long intervals of drought, but in each case rain came before it was too late. The cropped area increased. There was a remarkable drop in unirrigated cotton, but the total cotton outturn increased. Sugar-cane is replacing poppy as a result of the cessation of the China opium trade. Food crops generally did well. Cattle suffered from rinderpest. The prosperity of agriculture in Bundelkhand, long depressed, is reviving. Test works were opened in Mirzapur in the autumn, but the failure here was purely local and was compensated for by a good spring harvest.

**Punjab.**—The monsoon was late, and rainfall during the monsoon period somewhat below normal. The first months of winter were dry, but good rain in February and March saved the winter crops. The season was favourable to irrigated crops. The cropped area was greater than in 1911–12, but rather less than normal. The outturns of wheat, rice, and cotton were above normal; that of sugar-cane was 95 per cent. of normal. Barley is becoming of importance as an export crop, and has gained a permanent footing in the European market. Harvest prices rose even higher than in 1912. There was a scarcity of fodder, which had a bad effect on the cattle. The price of labour continues to rise.

**Punjab Canal Colonies.**—In the already established Colonies—the Lower Chenab, the Lower Jhelum, and the Chunian—allotments are almost completed. The Lower Chenab Colony has practically assumed the character of an ordinary district. Re-assessments caused some trouble in the Rakh branch, but elsewhere they were effected without difficulty. New market towns are springing up, and one of these is entirely under private control. The older towns are feeling the effect of the competition of the new, and the bank failures of 1913 had a prejudicial effect. Otherwise the progress of the colonies has been unimpaired. Metalled roads are being extended, and light railways are also to be introduced. Thirty-seven new schools were opened in Shahpur district alone. The purchase of occupancy and proprietary rights proceeds rapidly in the Lower Chenab and Chunian colonies; in the Lyallpur District of the former, nearly £200,000 has been received from Peasant grantees for proprietary rights, and almost all the yeomen and capitalists entitled to apply for such rights have done so.

In the case of grants made on conditions of horse and mule breeding, the conditions are to be more strictly enforced in future. New colonies are being established or are proposed on the Lower Bari Doab, Upper Chenab, and Upper Jhelum Canals. The new Colonization Act of 1912 in many respects improves the position of the colonists and has been welcomed by them.

**North-West Frontier Province.**—There was an extensive failure of autumn crops through lack of rain in September and October; and owing to shortage of rain at sowing time, the cropped area for spring crops was much below the average. All important crops save sugar-cane and cotton showed an outturn below normal. Prices were high, but stocks of grain and fodder generally sufficient.

**Central Provinces and Berar.**—The monsoon was good, but the ill-distribution of the later rains caused an outturn somewhat below normal. The cropped area decreased slightly. Wheat and gram were the only crops to do well.

**Burma.**—After two unsatisfactory years, Burma had, in 1912–13, excellent harvests. In Lower Burma the rainfall, though below the average, was timely and well distributed. There were good rains on the uplands. There was an increase in cropped area, and exceptionally little failure of crops. Rice, sesamum, groundnut, and cotton show considerable increases. In Amherst, experiments are being carried on in cotton cultivation by a private individual. There are now 44,000 acres under rubber, as against 32,800 in 1911–12. Owing to good harvests and high prices, labour is scarce.

**Madras.**—Rainfall was generally favourable in both the south-west and north-east monsoons, though excess of the former caused some floods. The total crop area was 39,120,000 acres, or 2½ millions above the average. Paddy and other food grains did well: groundnut continues to grow in importance and shows an increase from 1,300,000 to 1,450,000 acres. Cotton also shows a large increase, owing to high prices, a good season, and the spread of Cambodia cotton. Prices were high, but, save in two districts, did not touch scarcity rates. Ownership of land is said to be passing from the hands of absentees to those of the cultivators.

**Bombay.**—The season was fair or good in most parts of the Presidency, but in East Deccan there was an almost total failure of crops, and famine conditions prevailed in Ahmednagar and scarcity in Sholapur and parts of Poona. Outside these tracts there was an increase in the cropped area. In Sind there was a large increase owing to a good inundation, though the early subsidence of the river caused partial failure in rice and other crops. Food crops expanded at the expense of oilseeds and cotton, owing to the necessities caused by the bad season of 1911–12. The estimated outturn of food-grains was rather over 5 million tons as against 3½ millions in 1911–12.

## Agricultural Produce.

*(For further details see Statistical Abstract for British India, Tables 119 to 123.)*

The following table shows the area under the principal crops, in British India, and their territorial distribution, for 1912–13. The cropped area is always greater than the area of cultivated land, owing to double cropping. The figures (which are preliminary) represent thousands of acres:—

| Province. | Rice. | Wheat. | Millets. | Gram. | Total of all Food Grains and Pulses. | Oilseeds. | Sugar Cane. | Cotton. | Jute and other Fibres. | Total cropped Area. | Net Area cropped after deducting Area cropped more than once. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bengal | 21,166 | 146 | 10 | 184 | 23,061 | 1,822 | 222 | 26 | 2,963 | 30,498 | 25,955 |
| Bihar and Orissa | 17,049 | 1,281 | 1,257 | 924 | 28,040 | 1,554 | 266 | 89 | 321 | 32,547 | 26,697 |
| Assam | 4,646 | — | 2 | — | 4,761 | 322 | 36 | 36 | 99 | 6,276 | 5,825 |
| United Provinces | 6,779 | 7,378 | 6,703 | 5,507 | 38,084 | 1,015 | 1,424 | 1,119 | 138 | 43,727 | 35,459 |
| Punjab | 742 | 8,767 | 3,909 | 3,401 | 20,405 | 1,093 | 367 | 1,443 | 52 | 27,510 | 22,684 |
| N. W. Frontier Province | 45 | 927 | 299 | 169 | 2,195 | 89 | 30 | 55 | 1 | 2,549 | 2,540 |
| Burma | 10,219 | 25 | 816 | 34 | 11,757 | 1,412 | 14 | 236 | 1 | 14,295 | 13,856 |
| Central Provinces and Berar. | 5,000 | 2,969 | 5,909 | 808 | 18,213 | 2,809 | 26 | 4,622 | 140 | 26,385 | 24,622 |
| Madras | 10,944 | 18 | 11,426 | 138 | 30,740 | 2,942 | 187 | 2,389 | 291 | 39,120 | 34,683 |
| Bombay and Sind | 2,711 | 1,664 | 14,251 | 550 | 22,073 | 1,192 | 55 | 4,024 | 116 | 28,893 | 27,701 |
| *Minor Areas | 83 | 29 | 47 | 28 | 310 | 5 | — | 29 | — | 403 | 368 |
| *Total | 79,354 | 23,204 | 44,669 | 11,743 | 199,639 | 14,655 | 2,527 | 14,068 | 4,122 | 242,203 | 220,430 |

* The figures for Minor Areas are for 1911–12.

Among "other food grains and pulses" may be mentioned barley, of which there were 4,591,000 acres in the United Provinces, 1,007,000 in the Punjab, and 1,262,000 in Bihar and Orissa, and maize, of which there were 2,205,000 acres in the United Provinces, 1,098,000 in the Punjab, and 1,782,000 in Bihar and Orissa. Out of about a million acres under tobacco, 314,000 were in Bengal, 183,000 in Madras, and 105,000 in Bihar and Orissa.

Particulars for 1912–13 regarding some of the more important staples of Indian agriculture are given below. The figures are derived from returns of crop forecasts, and they include Native States as well as British India.

*Rice.*—Nearly one-third of the cropped area in British India is under rice. The provinces for which statistics are given in the table below ordinarily include 86 per cent. of the Indian rice crop. The figures are in thousands (omitting 000). Other provinces, notably the Central Provinces and Bombay, and Sind, produce a large quantity of rice. Although Bengal is the principal producer of rice, Burma is the largest exporter. The foreign exports of rice are subject to an export duty of three annas per maund (about 6*s.* 10*d.* per ton). The 1911–12 crop having been exceptionally good, the exports for 1912–13 showed a corresponding increase, although the harvest of that year was somewhat below the average of recent years. Prices in Rangoon ranged high owing to scarcity in Japan during the early part of the season.

| Province. | Area in thousands of Acres. | | | Yield in thousands of Tons of Cleaned Rice. | | |
|---|---|---|---|---|---|---|
| | Average of five years to 1910–11. | 1911–12. | 1912–13. | Average of five years to 1910–11. | 1911–12. | 1912–13. |
| Bengal - - | — | 20,437 | 20,691 | — | 8,635 | 8,375 |
| Bihar and Orissa | — | 17,363 | 17,021 | — | 8,906 | 6,296 |
| Assam - - | 3,591 | 4,045 | 4,053 | 1,424 | 1,596 | 1,849 |
| Madras - - | 10,363 | 10,288 | 9,994 | 3,150 | 5,832 | 3,910 |
| Lower Burma - | 7,418 | 7,373 | 7,835 | 3,147 | 3,324 | 3,563 |
| United Provinces | 6,472 | 5,220 | 6,811 | — | 1,778 | 1,998 |
| Total - - | — | 64,726 | 66,405 | — | 30,071 | 26,000 |

*Wheat.*—Wheat occupies usually about 10 per cent. of the whole cultivated area. The bulk of it is sown in autumn and reaped in April and May. The area under wheat has greatly expanded with the extension of irrigation. More than half of it is in the Punjab and the United Provinces, and rather more than half in each of these provinces is irrigated. The marginal table shows the area and yield of wheat, the figures being in thousands (omitting 000). The year was not very favourable in the important wheat-growing provinces, owing to drought first and hail later.

| Province. | Average of Five Years to 1910–11. | | 1911–12. | | 1912–13. | |
|---|---|---|---|---|---|---|
| | Area. | Yield. | Area. | Yield. | Area. | Yield. |
| | Acres. | Tons. | Acres. | Tons. | Acres. | Tons. |
| Punjab - - - | 9,338 | 3,192 | 11,018 | 3,809 | 9,289 | 2,989 |
| United Provinces - | 6,195 | 2,373 | 7,578 | 3,032 | 7,397 | 2,944 |
| Central Provinces and Berar. | 3,272 | 819 | 3,739 | 904 | 3,739 | 1,067 |
| Bombay - - | 1,752 | 399 | 1,284 | 265 | 1,539 | 451 |
| Sind - - - | 540 | 140 | 391 | 97 | 471 | 127 |
| Bihar and Orissa - | 1,224 | 401 | 1,285 | 557 | 1,281 | 532 |
| North-West Frontier Province. | 1,037 | 247 | 1,203 | 280 | 880 | 195 |
| Bengal - - - | 160 | 43 | 143 | 47 | 146 | 51 |
| Central India - - | 2,192 | 476 | 2,563 | 686 | 2,931 | 982 |
| Hyderabad - - | 1,054 | 69 | 970 | 43 | 851 | 48 |
| Rajputana - - | 921 | 209 | 963 | 204 | 1,014 | 211 |
| Mysore - - - | 3 | — | 4 | 1 | 4 | 1 |
| Total - | 27,688 | 8,368 | 31,141 | 9,925 | 29,542 | 9,598 |

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

**(Agricultural Produce.)**

The exports of wheat and wheat-flour are subject to great fluctuations, as the marginal figures show. The export demand for wheat has led to an extension of cultivation. This is very beneficial to India, partly because the crop is a profitable one, and partly because in years of scarcity the rise in prices renders the grain available for home consumption. In a famine year, the export falls to a trifling quantity. The wheat exported in one financial year is drawn mainly from the crop of the previous year, and the heaviest shipments are from May to August. In 1912 the United Kingdom imported more wheat from India than from any other single source. Exports of flour are beginning to show progress.

| — | Wheat. | Flour. |
|---|---|---|
| | Tons. | Tons. |
| 1903–4 | 1,295,600 | 40,500 |
| 1904–5 | 2,150,000 | 51,700 |
| 1905–6 | 937,500 | 44,950 |
| 1906–7 | 801,400 | 40,900 |
| 1907–8 | 880,500 | 37,200 |
| 1908–9 | 109,750 | 30,100 |
| 1909–10 | 1,050,600 | 35,100 |
| 1910–11 | 1,266,100 | 40,200 |
| 1911–12 | 1,361,200 | 51,500 |
| 1912–13 | 1,660,200 | 68,500 |

*Sugar.*—The area under sugar was reported to be 2,514,200 acres in 1912–13, and the yield was estimated at 2,552,000 tons. Both area and yield were somewhat in excess of 1911–12, and of the average for the five previous years. A good season and high prices account for the increase. More than half the total produce is from the United Provinces. The figures, however, are not very reliable, as in many large sugar-growing areas no accurate records are available, and sugar-cane is often grown in small and irregular clumps whose extent is not easily estimated. To the sugar-cane cultivated in British India must be added the extensive crops grown in Native States. In estimating the total output of sugar, account must also be taken of the large production of palm sugar, chiefly in Bengal, Madras, and Burma. Allowing for the former item, it is probable that India now produces about 3 million tons yearly, or one-third of the world's cane crop. By no means all of the sugar produced is converted into "refined" sugar; a considerable quantity both of cane in the raw state and of the unrefined sugar or *gur* is consumed as food, but the increasing demand for refined sugar, which is supplied chiefly from abroad, is prejudicially affecting the *gur* industry. The question of improving methods of cultivation and of manufacture both of *gur* and refined sugar is receiving careful attention. Imports of sugar (including confectionery and molasses) are given in the margin. The large increase in the imports from Java is remarkable. There are now no countervailing duties.

| Countries. | 1910–11. | 1911–12. | 1912–13. |
|---|---|---|---|
| | Tons. | Tons. | Tons. |
| Java | 438,000 | 408,000 | 466,000 |
| Mauritius | 146,000 | 85,000 | 150,000 |
| Austria-Hungary | 36,000 | 12,000 | 53,000 |
| Other Countries | 7,000 | 2,000 | 6,000 |
| Total | 627,000 | 507,000 | 675,000 |

*Tea.*—The marginal table furnishes an estimate of the cultivation and the production of tea in India during the years 1911 and 1912. The bulk of the plantations are in Assam and Bengal; the figures for other provinces are less reliable. Since 1885 the area under cultivation has doubled, and the production has increased four-fold. During 1912 the tea gardens employed 547,545 persons permanently and 95,590 temporarily. The capital invested by joint stock companies in tea production is returned at £17,649,781, and, in addition, a large but

| Province. | Area in thousands of Acres. | | | Production in thousands of Lbs. | | |
|---|---|---|---|---|---|---|
| | 1910. | 1911. | 1912. | 1910. | 1911. | 1912. |
| Assam | 496 | 503 | 362 | 175,095 | 179,053 | 198,798 |
| Bengal | | | 150 | 64,674 | 64,654 | 68,600 |
| Chota Nagpur | | | 2 | — | 285 | 269 |
| United Provinces | 8 | 8 | 8 | 2,045 | 2,535 | 2,657 |
| Punjab | 9 | 9 | 9 | 1,419 | 1,489 | 1,931 |
| Southern India | 48 | 53 | 59 | 19,968 | 20,510 | 23,615 |
| Burma | 2 | 2 | 2 | 68 | 76 | 83 |
| Total | 563 | 575 | 592 | 263,269 | 268,602 | 295,953 |

unknown quantity of private capital is invested. The average price realised in London in 1912–13 was 8·65*d.* per lb. as compared with 9·04*d.* per lb. in 1911–12. The exports of Indian tea by sea during the last three years are returned as shown in the margin. About 3 million pounds were also exported by land, chiefly to Afghanistan.

| Countries. | 1910–11. | 1911–12. | 1912–13. |
|---|---|---|---|
| | Millions of Lbs. | Millions of Lbs. | Millions of Lbs. |
| United Kingdom | 183·0 | 192·9 | 198·5 |
| Russia - - | 31·1 | 26·4 | 33·1 |
| Australasia - | 9·3 | 10·0 | 9·4 |
| Canada - - | 8·4 | 10·6 | 11·4 |
| China - - | 8·3 | 5·1 | 9·2 |
| Ceylon - - | 4·6 | 4·3 | 4·2 |
| Turkey-in-Asia - | 3·6 | 3·1 | 4·4 |
| United States - | 2·3 | 3·1 | 2·3 |
| Other Countries - | 3·8 | 5·4 | 6·1 |
| Total - - | 254·4 | 260·9 | 278·6 |

The growing appreciation of the superior richness and strength of Indian tea is shown by the increased imports into this country. In 1875 the United Kingdom drew 86 per cent. of its supplies from China and 13 per cent. from India, while in 1912 of the tea retained for home consumption only 3·6 per cent. came from China and 56 per cent. came from India.

*Jute.*—India has a virtual monopoly of the production of jute, which is chiefly grown in Bengal, Bihar, and Assam. The marginal table (000's omitted) gives the figures for these provinces, which represent about 90 per cent. of the total area under jute in British India. The 1911 and 1912 crops were greatly above the average; in 1913 a large area was planted, but the crop was damaged by excessive rain. Prices have risen during the last three years from £2 13*s.* per bale in 1910–11 to £3 15*s.* in 1912–13.

| | Area in Acres. | Outturn in Bales of 400 lbs. each. |
|---|---|---|
| Average, 1907 to 1911 | 3,150 | 7,900 |
| Year 1912 - - | 2,970 | 9,843 |
| Year 1913 - - | 3,170 | 8,752 |

The total Indian mill consumption of raw jute in 1912–13 was estimated at 791,000 tons as against 690,000 tons in 1911–12 and an average of 747,000 tons for the previous three years. Exports rose 8 per cent. in quantity and 21 per cent. in value. In addition there was a large export of jute manufactures which, owing to the boom in the jute trade rose in 1912–13 by 50 per cent. (*see* marginal table, omitting 000). Of the raw jute exports in 1912–13, 39 per cent. went to the United Kingdom, 21 per cent. to Germany, 14 per cent. to the United States, and 10 per cent. to France.

| Year. | Raw Jute. | | Jute Manufactures. | Total Exports. |
|---|---|---|---|---|
| | Quantity. | Value. | Value. | Value. |
| | Tons. | £ | £ | £ |
| 1910–11 - | 637 | 10,327 | 11,330 | 21,657 |
| 1911–12 - | 810 | 15,038 | 10,672 | 25,710 |
| 1912–13 - | 876 | 18,034 | 15,247 | 33,281 |

**Cotton.**—One of the most important crops for the grower, the Indian manufacturer, and the exporter, is cotton. The estimated area and yield of cotton in India are returned as shown in the table below for the last three years. The figures are in thousands (omitting 000). About half the total product is from Bombay and the Central Provinces. The season was a considerable improvement on the two previous years. Doubt, however, is thrown on forecasts of yield by comparing them with a computation based on the total of the net exports and the Indian consumption of cotton, which gives each year a somewhat larger figure than the forecasts.

**(Agricultural Produce.)**

| Province. | 1910–11. | | 1911–12. | | 1912–13. | |
|---|---|---|---|---|---|---|
| | Area (Acres). | Yield (Bales). | Area (Acres). | Yield (Bales). | Area (Acres). | Yield (Bales). |
| Bombay | 6,528 | 1,216 | 5,121 | 599 | 5,932 | 1,302 |
| Central Provinces and Berar | 4,487 | 629 | 4,648 | 913 | 4,523 | 910 |
| Madras | 3,873 | 235 | 2,878 | 335 | 2,426 | 317 |
| Punjab | 1,385 | 306 | 1,582 | 241 | 1,575 | 346 |
| United Provinces | 1,347 | 348 | 921 | 251 | 1,148 | 425 |
| Sind | 279 | 97 | 346 | 124 | 288 | 121 |
| Burma | 167 | 28 | 186 | 32 | 227 | 45 |
| Bihar and Orissa | 169 | 49 | 85 | 19 | 89 | 89 |
| Bengal | | | 63 | 25 | 51 | 21 |
| Assam | | | 36 | 11 | 35 | 10 |
| North-West Frontier Province | 33 | 8 | 56 | 12 | 55 | 13 |
| Ajmere-Merwara | 45 | 20 | 27 | 12 | 51 | 20 |
| Hyderabad | 3,562 | 293 | 3,234 | 300 | 2,888 | 300 |
| Central India | 1,349 | 237 | 1,400 | 228 | 1,314 | 206 |
| Baroda | 806 | 134 | 665 | 96 | 762 | 196 |
| Rajputana | 465 | 143 | 263 | 73 | 393 | 127 |
| Mysore | 101 | 10 | 101 | 17 | 154 | 19 |
| Total | 22,596 | 3,853 | 21,615 | 3,288 | 21,911 | 4,397 |

The exports of raw cotton from India in recent years have been as shown in the margin (000's omitted). The exports of 1912–13 were mainly furnished from the crop of 1911–12 when the season was unfavourable. Prices remained high. The bulk of the Indian cotton exported goes to Japan and Western Europe. Very little goes to England, as Lancashire requires a finer class of cotton than India can as yet readily supply.

| — | Quantity. | Value. |
|---|---|---|
| | Cwts. | £ |
| 1910–11 | 8,686 | 24,037 |
| 1911–12 | 7,329 | 19,684 |
| 1912–13 | 7,377 | 18,890 |

**Oil Seeds.**—The area under, and the yield of, the main oil-seed crops of India are given approximately in the margin. The figures are in thousands (*omitting 000*). The rape and mustard-seed crop is grown chiefly in the United Provinces, the Punjab, and Bengal; linseed in the United Provinces, the Central Provinces, Bihar, and Hyderabad; sesamum (til or jinjili) in the United Provinces, the Central Provinces, Bombay, Madras, and Hyderabad; while the groundnut area lies chiefly in Madras, Bombay, and Burma.

| Seed. | Average of Five Years to 1910–11. | | 1911–12. | | 1912–13. | |
|---|---|---|---|---|---|---|
| | Area. | Yield. | Area. | Yield. | Area. | Yield. |
| | Acres. | Tons. | Acres. | Tons. | Acres. | Tons. |
| Rape and mustard | 6,039 | 1,037 | 6,990 | 1,308 | 5,980 | 1,222 |
| Sesamum | 4,730 | 427 | 4,261 | 325 | 4,457 | 404 |
| Linseed | 3,171 | 380 | 5,052 | 642 | 4,053 | 536 |
| Groundnut | 836 | 420 | 1,214 | 606 | 1,343 | 630 |

Exports of seeds have been as shown in the margin for the last three years (in 000 cwts.). Linseed goes chiefly to the United Kingdom (2,200,000 cwts.), Belgium (1,600,000 cwts.), and France (1,400,000 cwts.). Belgium also took 1,600,000 cwts. of rape seed. Groundnuts go chiefly to France. The Argentine and Canadian linseed crops were particularly good in 1912, and prices declined. Hence the low exports of linseed despite the good crop of 1911–12.

| Seed. | Average 1908–9 to 1910–11. | 1911–12. | 1912–13. |
|---|---|---|---|
| | Cwts. | Cwts. | Cwts. |
| Linseed | 7,510 | 10,440 | 7,090 |
| Rape | 5,977 | 4,710 | 4,357 |
| Cotton | 5,234 | 4,073 | 2,611 |
| Sesamum | 2,709 | 1,896 | 1,557 |
| Groundnuts | 3,585 | 3,823 | 4,867 |
| Castor | 2,151 | 2,404 | 2,213 |
| Other sorts | 1,345 | 1,336 | 1,155 |
| Total | 29,709 | 30,014 | 24,537 |

## Co-operative Credit Societies.

These Societies were started by Government as an experiment in order that the poorer classes, and more particularly the cultivators, might be enabled to borrow money at reasonable rates, and might, at the same time, learn self-help and self-dependence.

The Co-operative Credit Societies Act of 1904 was passed in order to remove these societies from the operation of the general law; it conferred on them certain privileges, and laid down certain broad lines of guidance. In 1912 an amending Act was passed in the light of eight years' further experience. The 1912 Act covers all co-operative societies (the 1904 Act only dealt with credit societies), it recognises central unions, or federations of societies, which, since 1904, had become an important part of the movement, and differs in certain other respects from the 1904 Act. While imposing certain conditions necessary for the safe working of the societies and for the preservation of their co-operative character, the Act leaves as much as possible to the discretion of the local Government, and the types of society favoured in the different provinces vary widely.

The provincial registrars of co-operative societies are officials, and official aid is given in various ways, though loans by Government were never very extensive, and form a steadily decreasing proportion of the total working capital. Aid is also enlisted from non-official gentlemen of local influence, and in most provinces is more readily forthcoming than at the beginning of the movement. The accounts of every society must be annually audited by a person approved by the registrar. The latter also has a certain discretion as to granting applications for registration, and, in view of the extraordinary popularity of the movement, it has been found advisable in most provinces to adopt a restrictive, rather than a stimulating, policy in dealing with applications.

The two main difficulties which were foreseen in the case of village societies were those of proper supervision (obviously necessary in view of the prevailing illiteracy) and the provision of funds. Both these difficulties have been met by the "central societies" referred to above. These are of various kinds, the type most generally approved being the "Central Banking Union" which prevails in Bengal and is being largely adopted elsewhere. These unions are federations of village societies; they maintain a staff of trained inspectors who are supplementing, to an increasing degree, the inspecting work of the official staff, and they also act as banks for their affiliated societies, forming a medium between the latter and the open money market. In Bombay there is a central co-operative bank for the entire province with a Government guarantee; the Central Provinces also have one, but without such guarantee.

The village societies are almost all on the unlimited liability basis, and therefore have to exercise considerable discrimination in admitting members. They may not distribute their profits among members save with the sanction of the local Government, but in some provinces (*e.g.*, the United Provinces and the Punjab) it has been found that societies formed on a share-basis answer best. Dividends, however, may not in those provinces be distributed until 10 years after the first share-payment. In other provinces the strict Raiffeissen rule is observed, and profits on working (beyond what is required for the reserve) go to the reduction of interest on loans to members.

The rates of interest charged by village societies vary from 7 per cent. in Bombay to 15 per cent. in Burma: the average is 9 per cent.—a figure far below that charged by money-londers—indeed, the money-lenders are being forced to lower their rates by the competition of the societies. It is estimated that the loans of credit societies to their members represent a saving to the agriculturist of more than 10 per cent. in interest charges. The interest paid by the societies on deposits is usually about 6 per cent. In many districts the money-lenders themselves invest in these societies, and in the United Provinces it is said that the hoards of the villagers are being drawn upon for the same purpose.

Of the purposes for which loans are required the most important is payment of old debts. In many cases the society is able to arrange a composition between its members and the money-lender, so that the amount actually repaid does not represent the entire burden from which the villager is thereby freed. Hostility to the co-operative movement on the part of the money-lenders is, in many parts, keen and systematic; but elsewhere they have themselves been drawn into it. The purchase of plough-cattle stands next in importance among the objects for which loans are taken. Surprisingly little is drawn for uneconomic purposes such as expenses of ceremonial.

**(Co-operative Credit Societies.)**

The educative effect of the movement in the villages is considerable. The societies are in close touch with the Agricultural Departments, and are much utilised by the latter for assisting demonstrations, distributing seed, &c. In some cases they have begun to interest themselves in primary education, village sanitation, and other matters of local interest. Their efforts at settling disputes between members have led to an appreciable decrease in litigation. Membership of a society is regarded as a certificate of good position.

The urban credit societies, chiefly formed among salary earners, form a small but increasing part of the movement. These are chiefly limited liability concerns. There are also co-operative societies, in town and country, formed for objects other than credit—*e.g.*, for purchase of seed or manure, or, in the case of weavers and other artizans, of raw material for their trade; and for marketing the goods of members. But these ventures represent a more advanced stage of education in co-operation than the credit societies, and their development is comparatively slow. In Burma, cattle insurance societies have proved a great success.

The astonishing rapidity with which the movement has spread is shown by the following table, which gives the figures for British India together with Mysore and (for 1912–13) Baroda. (It should be recollected that the present policy in almost every province is to check any too rapid extension of the movement):—

| At end of Year. | 1905–6. | 1906–7. | 1907–8. | 1908–9. | 1909–10. | 1910–11. | 1911–12.* | 1912–13. |
|---|---|---|---|---|---|---|---|---|
| Total No. of members. | 28,629 | 90,844 | 149,160 | 184,889 | 230,698 | 314,101 | 403,318 | 573,536 |
| Total working capital. | £ 32,000 | £ 158,000 | £ 294,000 | £ 538,000 | £ 827,000 | £ 1,358,000 | £ 2,238,000 | £ 3,562,000 |

* Figures for 1911–12 exclude Mysore.

The following table shows the position of the principal provinces as regards the movement:—

| | Central Societies. | Non-Agricultural Societies. | | Agricultural Societies. | |
|---|---|---|---|---|---|
| | No. of Societies. | Total Membership. | Working Capital. | Total Membership. | Working Capital. |
| | | | £ | | £ |
| Madras | 11 | 17,841 | 71,000 | 64,037 | 296,000 |
| Bombay | 4 | 17,428 | 90,000 | 29,276 | 152,000 |
| Bengal | 17 | 11,962 | 64,000 | 42,455 | 152,000 |
| Bihar and Orissa | 8 | 1,983 | 5,000 | 28,005 | 57,000 |
| United Provinces | 51 | 4,746 | 24,000 | 89,296 | 257,000 |
| Punjab | 34 | 2,973 | 17,000 | 129,662 | 647,000 |
| Burma | 72 | 2,624 | 36,000 | 26,033 | 189,000 |
| Central Provinces | 35 | 1,439 | 6,000 | 22,854 | 90,000 |
| Assam | 9 | 1,733 | 12,000 | 8,833 | 16,000 |
| Elsewhere | 10 | 13,649 | 55,000 | 26,927 | 79,000 |
| Total | 251 | 76,378 | 380,000 | 467,378 | 1,935,000 |

Of the total capital of the agricultural societies, £448,000 represents share capital and deposits of members; and £1,320,000, loans and deposits of non-members and other societies, £71,000 reserve, and £66,000 loans from Government.

The following is a brief account of the working of the movement in the principal provinces:—

**Bengal.**—The number of members of all societies has grown from 40,000 to 57,000. The number of central societies has risen from 12 to 17. These societies are "Banking Unions," *i.e.*, they both act as banks for their affiliated branches and (in most cases) provide a staff for organizing and supervising them. Individuals as well as affiliated societies are admitted as shareholders, a business element being thus secured in the management. Four central banks have cash credits with joint stock banks. There is still, however, a lack of fluid capital, and the need is felt of a provincial bank.

The village societies are of the non-share type. Local non-official assistance is now more freely forthcoming than at first, as also is local capital. The prevailing rate of interest in Bengal is high, and that charged by the societies is proportionately so. Efforts are being made to reduce it.

**Bihar and Orissa.**—The total membership rose from 28,000 to 31,000. There are eight central banking unions of the Bengal type, and more are being formed. It is felt that the success of the movement depends greatly on these institutions, which, when started in a district, have an excellent effect on the societies which affiliate themselves thereto. Much good work is being done by missionaries in backward tracts and other non-officials. Here, as in Bengal and Assam, the non-share type of village society has been found to work best.

**Assam.**—Six central unions were formed during the year. The total number of members has risen by 1,200, and is now 11,000. The creation of a separate office of Registrar of Co-operative Societies and Director of Industries is under consideration. The issue of loans to societies by Government was found not to answer, and has been discontinued.

**United Provinces.**—The total number of members has risen from 100,000 to 107,000. Almost all village societies are now affiliated to a central society; these latter are now run on similar lines to those in Bengal; their financial position is excellent. Village societies are practically all on a share basis, but dividends on the shares can only be paid ten years after the first share instalment has been paid—by which time the societies should have accumulated considerable capital of their own. The general rate of interest charged (15 per cent.) is high enough to prevent over-borrowing. Local money-lenders are investing in the societies, and the village hoards are, it is said, being drawn on for the same purpose. Co-operative trading is showing signs of development.

**Punjab.**—Here the movement has been more extensive than in any other province, and, during 1912–13 the total membership of Agricultural Societies increased by 45 per cent. and the working capital by 72 per cent.; of the latter, over half consists of share capital, profit, and members' deposits—the most desirable forms of money for co-operative societies. The share system prevails as in the United Provinces and, in newly-started societies, shares are made non-returnable. The amount of loans overdue is large, but probably this is due to the traditional disregard for repayment which the educative effects of the movement will in time overcome. There is a great preponderance of Musalmans among the members, due largely to the fact that the Musalman population, being more liable to indebtedness than the Hindu, has been more eager to welcome the movement. The hostility of money-lenders is strong, and to some extent organised, but attempts are being made to draw them also into the movement. It is calculated that 50 lakhs of debt have been cleared off in the year. Many of the loans are for purchase of proprietary rights in the Canal Colonies.

Eight new central societies were started in 1912–13. They now exist almost everywhere where they are needed. They are, however, almost purely financial in their functions and do not supervise their affiliated societies. The expenses of inspection, however, are largely met by contributions from the societies, who pay in one way or another for 20 Sub-Inspectors.

**Central Provinces.**—Membership more than doubled and working capital was more than trebled during 1912–13. A provincial bank has been started, and, in connection therewith a supervising union for the whole province. The amount of locally subscribed capital shows a gratifying increase.

**Burma.**—The central unions number 67, in addition to four banks, of which one (the Upper Burma Central) is practically the provincial central bank. Membership has risen from 22,000 to 31,000. In the Mon Canal tract societies have been formed on Government initiative and with financial support in connection with a canal colony scheme. Otherwise Government leaves all propagandist work to the unions. Much has been done in the direction of land redemption. Cattle insurance societies are an important feature.

**Madras.**—The total membership has risen to 83,000. There are seven central banks and four administrative unions: there are over 1,000 agricultural societies, the great majority of which are reported satisfactory. The districts where, owing to

**(Co-operative Credit Societies.)**

defective education, societies have not turned out well, are receiving special attention. As many as 881 applications for registration were awaiting disposal in July 1913, but many of these were from unsuitable persons. It is hoped, however, to start at least 200 new societies in the present year. The urban side of the scheme is well developed in this province.

**Bombay.**—Here too the urban side is well developed. There are several "Peoples' Banks" in the towns which play a large part in financing the agricultural societies round. There are 10 weavers' societies. Membership of all societies has risen from 29,000 to 47,000. The Central Co-operative Bank paid its maximum admissible dividend of 6 per cent. and a small sum was left over to be applied to rebate of interest to borrowing societies. The Nira Canal societies advanced over 7 lakhs to sugar cultivators, and similar "canal groups" are contemplated. Agricultural societies are of the non-share type. The issue of Government loans, which led to the formation of some unsatisfactory societies in Satara, has been discontinued. In Ahmednagar, where there was famine, the local societies obtained loans of about Rs. 54,000 from two central banks.

In many districts the normal rate of interest is so low that Co-operative Credit Societies are hardly needed, and the movement here is towards other forms of co-operation.

# CHAPTER VII.

## FORESTS.

*(For further details see Statistical Abstract of British India, Tables 59, 60, and 125.)*

**General.**—Systematic conservancy of the Indian forests is based on the Forest Act of 1878, which gave the Government powers of dealing with private rights in the forests of which the chief proprietary right is vested in the State. Special forest enactments have also been passed for some provinces, and a staff of trained forest officers has been organised. Forest administration is based upon the principle that State forests should be administered for the public benefit; they are worked, therefore, with a view to combining all reasonable facilities for their use by the public with the protection necessary for their preservation as sources of fuel and timber and as retainers of moisture in the soil. The forests are classified as "reserved," "protected," or "unclassed." In the reserved areas the control of the Forest Department is more complete than in the protected or unclassed forests. In the latter, the area of which cannot be precisely stated, are included large tracts of unoccupied waste, especially in Burma, much of which will probably become agricultural land. Among the most important measures of conservancy are the prevention, so far as possible, of the fires which are liable to devastate the forests, the plantation and reproduction of timber and firewood, the maintenance of a supply of seed-bearing trees, and the regular reproduction of timber of the more valuable kinds. About half of the reserved forests is at present worked under regular working plans. At present the reserved (including leased) forests cover an area of about 96,000 square miles; and there is scope for further reservation in Assam and Burma. Outside the reserves there are about 147,000 square miles of State forests, including 8,500 square miles of protected forests. Some part of this will eventually be brought within the "reserve" area. In thus creating a "reserve" the fullest consideration is given to claims of persons who have hitherto exercised rights in the area concerned. The forests dealt with in this chapter are, almost exclusively, State forests; there are also areas under the management of district officers and of local bodies. The limited areas of private forest, except where they have been leased to the Government, are being gradually exhausted. In every province a very few of the most valuable timber trees are declared to be reserved trees, and can only be felled under special licence. Outside the reserves, the country folk are generally allowed to obtain from the State forests timber, bamboos, firewood, and grass for their own use without charge; inside the reserves, persons specially licensed are allowed to extract timber or other produce, on payment of fees, though all rights recognised by the forest settlements are preserved to the public. Offences against the forest laws consist chiefly of illicit grazing and unauthorised felling or removal of produce. Forest revenue is raised by royalties on, or by the sale of, timber or other produce and by the issue at specified fees of permits to graze cattle, or to extract for sale timber, firewood, charcoal, bamboos, canes, and minor forest produce. The gross revenue derived from forests in 1912–13 was £2,153,009, including £501,262 and £1,513,039 received for timber and other produce removed from the forests by Government agency and by consumers (or purchasers) respectively. The charges amounted to £1,152,385, leaving a net revenue of £1,000,624. Some of the Native States, such as Kashmir, Mysore, Travancore and Baroda, have also organised a systematic forest administration, from which they derive a considerable revenue. The following table shows the area in each province under the Forest Department and the net revenue derived therefrom:—

**(Forests.)**

| | Forest Area on 30th June 1912. | | | Percentage of Total Area of Province under Forest. | Net Revenue. for financial Year 1912–13. |
|---|---|---|---|---|---|
| | Reserved. | Protected. | Unclassed. | | |
| | Sq. Miles. | Sq. Miles. | Sq. Miles. | | £ |
| Bengal | 4,663 | 1,711 | 4,030 | 13 | 62,700 |
| Bihar and Orissa | 1,719 | 1,057 | — | 3 | 5,500 |
| Assam | 4,321 | — | 18,404 | 46 | 22,200 |
| United Provinces | 4,117 | 30 | 29 | 4 | 127,600 |
| Punjab | 2,208 | 5,203 | 1,312 | 9 | 29,300 |
| North-West Frontier Province | 236 | — | — | 2 | 7,700 |
| Central Provinces and Berár | 21,038 | — | — | 21 | 81,700 |
| Burma | 26,135 | — | 111,218 | 81 | 456,700 |
| Madras | 18,601 | — | 838 | 14 | 64,100 |
| Bombay | 11,979 | 495 | — | 10 | 153,300 |
| British Baluchistan | 313 | — | 472 | 2 | — |
| Coorg | 520 | — | — | 33 | — |
| Ajmer-Merwara | 142 | — | — | 5 | — |
| Andamans | 156 | — | 2,013 | 69 | — |
| Total | 96,148 | 8,496 | 138,316 | 24 | 1,000,624* |

* Includes revenue and expenditure for areas directly under the Government of India, and general charges in India and England.

The following paragraphs treat of forest administration in each Province for the year ending 30th June 1913:—

**Bengal.**—The Bengal forest areas lie in the Sundarbans, the Chittagong hill tracts, and in the extreme north of the Rajshahi Division. Working plans have been, or are being, provided for 4,944 square miles. Protection against fire was successfully conducted, only 1,643 acres, or 4 per cent. of the protected area having been burnt, as against 2,642 in the preceding year.

Forest offences have been showing an increase, but this is attributed to greater vigilance on the part of the staff. In 1913 such offences numbered 1,572.

Arrangements have been made for the extraction of bamboos for paper-pulp in Darjeeling by agreement with an agency. Similar negotiations are proceeding for the Chittagong hill tracts.

The yield of timber was 6·1 million cubic feet—rather less than in 1911–12. Practically all the timber (except for Government and railway requirements) is extracted by private agency, sections of standing wood being sold by auction or tender, except in Chittagong and the Chittagong hill tracts where it is still sold at fixed royalty rates. Fuel shows an increase. The surplus revenue shows a considerable increase over past years, but this is largely due to outstandings from the previous year. The final distribution of the forest cadre as between Bengal, Assam, and Bihar was settled after the close of the year. Keddah operations were carried out in Tista and Kurseong; negotiations for keddah operations in other parts are proceeding.

**Bihar and Orissa.**—Working plans have been sanctioned for 1,460 square miles, which is practically all the area for which they are at present required. Fires were numerous, 34,455 acres being burnt. They mostly occurred in Singhbhum and are attributed to malice, as the reservation and protection of the areas is said to have caused resentment. There was a considerable decrease in the number of offences reported (1,171 as against 1,461). This is attributed in part to the presence of man-eating tigers in Sambalpur. The forests are, with small exceptions, exploited by the sale of standing timber either in the form of selected trees or sections of forest. The total value of sales to purchasers was £26,250, the outturn of timber was 1·3 million cubic feet, and of fuel 928,000 cubic feet. All these figures show a slight increase. Minor products include mica and iron-ore.

Inquiries as to the effect on water supply of the denudation of forest areas show that in many localities denudation is proving prejudicial. In some districts private forests are being rapidly destroyed; in others, however, the zamindars are beginning to practice conservation.

**Assam.**—There is at present little systematic working save in the *Sal* forests of the Western Circle Reserves. The forest staff has at present more than enough to do in examining the enormous "unclassed" areas of which the sylvicultural conditions are little known, and of which a large part still awaits survey. Communications are in

need of improvement, and this, together with the poverty of demand and the scarcity of labour, makes exploitation difficult, so that felling is in arrears. In 1912–13, however, the demand for timber was exceptionally keen owing to the restriction of sales in Bengal; the outturn of timber was 7·3 million cubic feet, and of fuel 6·9 cubic feet. The royalty on tea-box timber has been temporarily remitted to enable the local mills to compete against foreign enterprise. Minor produce includes lac, rubber, and ivory. 284 elephants were caught in the year, and the question of restricting catching operations is under consideration, as the number of wild elephants is said to be decreasing. The surplus revenue of the Department showed a slight increase.

**United Provinces.**—Working plans have been sanctioned for practically all the forests in the provinces, save in the Kumaon Circle, where no regular working plans have been made pending the completion of settlement. Damage from fire covered 59,251 acres as against 56,031 in 1911–12, chiefly owing to three bad fires in the Eastern Circle where the dense crop of coarse *Tarai* grasses is favourable to fires. The resin industry flourishes, the outturn of crude resin in the Naini Tal division being, in 1912, 28,029 maunds, as against 16,811 in 1911, though, owing to a slump in prices, the profit was less in 1912–13 than in 1911–12. The total outturn of timber was 1·16 million cubic feet as against ·838 million in 1911–12, the increase being due to a keen demand and to the adoption in some districts of a system of improvement-cum-selection felling. In some divisions the system is being adopted of guaranteeing a minimum outturn to the purchasers of *coupes*. Fuel fell from 12 million to 9·46 million cubic feet, owing to the smaller number of drought-killed trees extracted. English trout have been successfully introduced into the Kumaon lakes and streams. Proposals for the afforestation of certain waste lands in Etawah and elsewhere have been submitted.

**Punjab.**—The area under the Forest Department has been reduced, chiefly by the transfer of 4 square miles to the Canal Department for colonisation. Further similar disforestation measures are in progress The restriction of the excessive grazing rights in the Kangra forests is under consideration; on the other hand it is proposed to abandon the attempt to protect small scattered areas lying in the midst of cultivation. Working plans exist for all except 226 square miles of the forests requiring them. Offences against forest laws numbered 9,956 as as against 9,250 in 1911–12—the increase being chiefly under "unauthorised grazing," due to scarcity of fodder. The area burnt amounted to 1·1 per cent. of the area protected. Resin tapping experiments continued, and the latest French pattern of turpentine distillery plant has been procured since the close of the period under review. It is proposed to carry on this industry by departmental agency until the best method of producing marketable turpentine, &c. is evolved. The outturn of timber was 7·9 million cubic feet as against 4·1 million in 1911–12, the increase being chiefly due to accidental causes. The outturn of firewood was 16 million cubic feet. The amount of timber extracted departmentally decreased, and is now only 2·66 per cent. of the total outturn.

**North-West Frontier Province.**—The total outturn of timber was 2·9 million cubic feet, as against ·49 million only in 1911–12, the increase being due to the exploitation of a new blue pine area, to the working off of arrears of fellings, and to a market having been found for walnut trees.

**Central Provinces and Berar.**—The forest area was reduced by 466 square miles, chiefly owing to disforestment for Ryotwari settlements. Considerable progess was made with working plans. The number of forest offences (10,663) shows an increase. Fire protection was satisfactory, 98 per cent. of the area under protection being successfully protected. The area subjected to systematic fellings increased by 16,715 acres. New grazing rates were introduced in the Central Provinces, and resulted in an increased revenue from this source though the number of cattle grazed decreased. The outturn of timber and fuel was over 36 million cubic feet. A proposal has been submitted to the Government of India for re-organising the establishment of Rangers and Guards.

**Burma.**—The Forest Reserves were increased by 887 square miles. Working plans are still required for 7,762 square miles of reserved and unclassed forest. There are 12,776 square miles of reserves still awaiting survey for which a special Forest Survey branch will be required. There was an increase in the number of offences reported (4,765 as against 4,228) owing to the greater efficiency of the staff and to the

exhaustion of fuel and timber supplies in unclassed forests which led to raids on the reserves. Fire protection showed an improvement, being successful over 95·1 of the protected area. 255,000 tons of teakwood were extracted, including 41,000 tons extracted by departmental agency. The amount of other timber and of fuel extracted by purchasers rose by 34 and 65 per cent. respectively. The former increase is due to the high price of teak. Roads and buildings are urgently required, but the funds for them are not forthcoming.

All the unclassed forests are open to free grazing, and injury from grazing in the reserves is only reported from a few districts where the unclassed forests have disappeared and no other places for grazing exist.

**Madras.**—Attention is being paid to the hitherto neglected subject of working-plans. The area burnt decreased but was still considerable. Experimental operations were undertaken in hay-making. The quantity of timber extracted and the value of minor produce increased, but under fuel and bamboos there was a decrease. The exploitation of fuel has been transferred from Government to private agency. Twenty elephants were captured.

The recommendations of the Forest Committee, appointed in January 1912, were received in January 1913. They recommend that the agency of the village Panchayat should be invoked for the control of a considerable portion of the reserved area, where grazing and the supply of fuel, &c., for local use are the prime objects; major reserves, which are important for climatic reasons, and as producers of timber, &c., for the town market will remain under the Forest Officer. Orders have been passed by Government accepting the bulk of the proposals.

**Bombay.**—Over 11 square miles were disforested for cultivation in the Central Circle. The area burnt (96,377 acres) showed a considerable decrease, owing largely to the scarcity of outside grass, which caused people to recognise the necessity for protecting forest grass as much as possible. The number of convictions (16,889) for forest offences decreased, except in the Central Circle, where the scarcity of outside grass had the opposite effect. The importance of the forest grass reserves, especially in cotton districts where there is little other fodder—was strongly emphasized by the drought which affected some of the Central districts. Two dry seasons running have impaired natural reproduction. The outturn of timber was over 8 million cubic feet; and of fuel, 52 million cubic feet.

**Coorg.**—The total outturn of timber (including Sandalwood) was 370,632 cubic feet as against 318,531 in 1911–12. "Spike" disease in sandal trees is now thought to be connected with the presence of Lantana, and this shrub has consequently been vigorously uprooted. Sandalwood fetched a record price at auction.

**Andamans.**—The policy of development to be adopted in the north and middle island is still under discussion. Survey was begun in the latter island during the year. It is proposed to make a rough exploration of the Little Andaman and some of the Nicobar islands. The rubber experiments are promising. The outturn of timber was 740,000 cubic feet, as against 594,000 in 1911–12, the increase being due to delays in selling during 1911–12. Revenue shows a steady tendency to increase. A new sawmill is to be procured, the present one being inefficient.

## Imperial Forest Research Institute.

The work of the Institute comprises tuition and research in sylviculture, forest economy, zoology, botany and chemistry. During 1912–13 investigations were undertaken in connection with working plans, the cultivation of the "sal," tree-diseases, &c., while the Forest Economist, Chemist, and Botanist were engaged in inquiring into the production and utilisation of many kinds of forest produce, such as woods for railway sleepers, matches, tea-boxes, &c., grasses and bamboos for paper pulp, resin, tan-barks, and other products.

The Zoologist studied *sal* insect pests in the United Provinces and dangers to which the *lac* crop is subject.

In the Forest College a Provincial Service Class of 16 was started which, with the classes for rangers, made a total of 90 students on 1st March 1913.

# CHAPTER VIII.

## MINERAL PRODUCTION AND MINING.

*(For further details see Statistical Abstract for British India, Table 222; "Quinquennial Review of the Mineral Production of India during the years 1904 to 1908" in Records of Geological Survey, Vol. XXXIX., 1910; and "The Mineral Production of India during 1912" in Vol. XLIII., Part 2, 1913.)*

### Mineral Production.

**General.**—During recent years much has been done to develop the mineral resources of India. The minerals that have been chiefly worked are those which can be consumed by direct process on the spot, or which, owing to their abundance and cheapness, are suitable for export in the raw state. The output of minerals in India (including Native States) has shown a marked increase in recent years, the estimated value of that for the four years, 1909 to 1912, is given in the margin (building and road-making materials being excluded). In 1912 coal rose 16 per cent. in quantity and 32 per cent. in total value. Manganese, mica, and petroleum all showed considerable increases. By far the most important minerals are coal and gold, the production of which in 1912 was valued at £3,310,365 and £2,271,806 respectively, followed by petroleum, £975,278, manganese ore, £885,404, and salt, £509,824. These estimates of values relate to all production for which returns are available, but as they represent in some cases spot values, in others values at the sea-ports, they cannot serve for comparison with the production of other countries, but only for the comparison of one year with another in India itself.

| | £ |
|---|---|
| 1909 | 7,688,000 |
| 1910 | 7,700,000 |
| 1911 | 7,734,000 |
| 1912 | 9,950,000 |

**Coal.**—Coal is the most valuable mineral product worked, and is by far the largest supporter of labour. The production during 1906–10 averaged 12,109,997 tons; in 1911 it rose to 12,715,534, and 1912 to 14,706,339 tons. The marginal table shows the territorial distribution of the output for 1911 and 1912. The areas not enumerated include the Punjab, Baluchistan, and Bikanir, in which production has hitherto been fluctuating and not very progressive. Bihar produces about 65 per cent. of the coal won in India, the Jherria coal-field (opened in 1893) providing in 1912 7,653,000 tons—over half the total output, the Raniganj 4,944,000 tons, and the Giridih 731,000 tons.

| | 1911. | 1912. |
|---|---|---|
| | 000 tons. | 000 tons. |
| Bengal - - | 11,468 | 4,306 |
| Bihar and Orissa - | | 9,126 |
| Hyderabad - - | 505 | 482 |
| Central Provinces | 211 | 234 |
| Assam - - | 295 | 297 |
| Central India - | 144 | 150 |
| Other places - | 93 | 111 |
| Total - | 12,716 | 14,706 |

The exports of Indian coal, 899,000 tons, were 36,000 over those of 1911. Ceylon, the Straits Settlements, and Sumatra are the principal markets. Thus the amount of the increased production absorbed in India must have been over 1½ million tons, to which may be added an increased import of nearly 300,000 tons. This points to a considerable expansion of industry.

Price at the pit's mouth rose from 3*s.* 7*d.* to 4*s.* 6*d.* per ton. The highest recorded price has been 5*s.* 3*d.* in the "boom" year 1908. The coal now being worked is near the surface, and labour is cheap; as a consequence Indian coal has a lower value at the pit's mouth than that of any other country.

The average number of persons daily employed in coal mines during 1912 rose from 116,155 to 132,567. As a result of improved mining methods, the output per head has grown from 89 tons in 1904 to 111 tons in 1912, but even this is a somewhat low degree of efficiency if tested by European standards. The labourers include chiefly landless day labourers. In some old established centres a mining caste is being evolved, and allotments of land are made to miners.

**Gold.**—The production of gold amounted to 590,555 ounces, valued at £2,271,806, in 1912, compared with 583,567 ounces, valued at £2,238,143, in 1911. By far the greatest part of the gold (561,065 ounces) came from the Mysore gold-fields. The

Hutti mine in Hyderabad produced 16,993 ounces in 1912. The Dharwar gold mines have been closed down.

**Petroleum.**—The amount in 1912 reached the record figure of 249 million gallons, valued at £975,278. Since the introduction of European drills the production of petroleum in Burma has rapidly risen. The deeper sands which have recently been tapped at Yenangyaung have led to a considerable increase of the production of this field which, in 1911, had shown a falling off.

The other Burma fields also show an increased return—especially the Minbu field (first worked in 1910) the production of which has risen from 632,000 gallons in 1911 to 3,896,000 gallons. Outside Burma, the Digboi field in Assam produced 3,747,000 gallons. A small quantity was produced in the Punjab.

There are oil refineries in Rangoon, and the export of paraffin wax shows a considerable rise.

**Manganese.**—Manganese ore is now chiefly obtained from extensive deposits in the Central Provinces, Madras, Bihar, Mysore, and Bombay. Although there was a slight falling off in quantity produced (*see* table in the margin), the value increased from £649,000 to £884,000. The exports for 1912 show a large increase both in quantity and value. The ores worked are for the most part exceedingly rich, as the high cost of transport renders the working of the lower-grade ores unprofitable for export, though they might profitably be worked if a steel industry existed in India. There is no smelting plant in the chief producing centres, and the ore is shipped in bulk exactly as mined, to be smelted in the United Kingdom, Germany, or the United States.

| — | 1911. | 1912. |
|---|---|---|
| | Tons. | Tons. |
| Central Provinces | 445,051 | 414,542 |
| Madras - - | 125,865 | 117,246 |
| Bombay - - | 45,330 | 43,538 |
| Mysore - - | 21,573 | 29,293 |
| Bihar and Orissa - | 25,152 | 27,173 |
| Central India - | 7,319 | 5,652 |
| Total - | 670,290 | 637,444 |

**Salt.**—The production of salt in India (excluding Aden) in 1912 was 1,454,602 tons, as compared with 1,325,882 tons in 1911. An account of salt production in India is given on pages 32 to 34.

**Saltpetre.**—14,797 tons were produced as against 14,679 in 1911, chiefly in Bihar, the United Provinces, and the Punjab.

**Mica.**—India has for many years been the leading producer of mica, turning out more than half the world's supply. The output returns for mica are unreliable, but the amount exported (59,433 cwts. in 1912) shows a rapid and continuous increase. The mines are chiefly situated in Bihar and Madras.

**Lead.**—This is produced in Burma, chiefly in the Northern Shan States. The total output in 1912 was 25,576 tons, as against 35,361 tons in 1911. The value (including the silver contained in the ore) was £164,829.

**Tungsten.**—The wolfram deposits of Burma have been considerably developed of late. The output in 1912 was 1,671½ tons (value £115,200) as against 1,308 tons (value £99,989) in 1911.

**Rubies.**—The output of the Burma Ruby Mines Company was 323,245 carats, valued at £69,547, as against 288,213 carats, valued at £67,594 in 1911. The figures include small quantities of sapphire and spinel.

**Other Minerals.**—These include iron ore (the production of which rose from 366,000 to 580,000 tons in 1912 owing to the activity of the recently-started Tata Iron and Steel Company), tin-ore, and monazite, the working of which is being rapidly developed in Travancore.

## Mining Concessions.

Since Rules were issued in 1899 to govern the grant of exploring and prospecting licences and of mining leases, the number of concessions in lands in which the mineral rights have been retained by Government (exclusive of Native States) has rapidly increased. The concessions granted in Government lands fell in 1912 from 775 to 622 (487 prospecting and 75 exploring licences and 60 mining leases), chiefly owing to the diminution of the rush for wolfram in Tenasserim, and to fewer manganese

applications in the Central Provinces. In some areas, including nearly all the coal-bearing land in Bengal, mineral rights have been conceded permanently with the surface ownership.

Under revised Rules which were issued in 1913, the "Exploring licence" has been abolished. Prospecting licences for a limited period may be granted to persons holding certificates of approval from the local Government. Such licences carry a right to a mining-lease, or, in the case of precious stones, to the first offer of a mining lease that the Government of India may think fit to make. The area let to a single lessee is limited. Rights in respect of petroleum and of certain metals of importance in the manufacture of armaments may be granted only to British subjects.

In practically all Native States the mineral rights belong to the respective rulers, and concessions are granted for mining and prospecting under rules that involve a certain amount of supervision by the Government of India.

## Inspection of Mines.

The Indian Mines Act, 1901, applies to the whole of British India, and regulates all mineral workings which are either true mines worked underground, or open pits, quarries, or excavations more than 20 feet deep or any part of which extends beneath the superjacent ground.

The number of mines of all kinds coming under the Act in 1912 was 1,147, of which 527 were coal mines, including 329 in Bihar and Orissa, 473 mica mines, including 395 in Bihar and Orissa, and 47 manganese mines. The mines gave employment to an average daily number of 164,302 persons (as against 146,336 in 1911), of whom 101,971 were men, 56,507 women, and 5,824 children; 103,980 worked underground. The labour material is very unformed, possesses little skill, and requires constant supervision.

There were 133 fatal accidents, causing 185 deaths, during the year 1912, an increase of 11 in the deaths as compared with 1911. Of the deaths from accidents, 13 occurred in wolfram mines which had not previously been brought under the scope of the Act. 157 deaths occurred in coal mines, 23 being due to a drowning accident ascribed to misadventure. The death-rate per thousand employed in coal mines is decreasing, and in 1912 was 1·29 only. Supervision is very much better than it used to be. There is, however, still room for improvement in this direction.

Twenty-four prosecutions were instituted in 1912, resulting in the conviction of 24 persons.

## Mining Education, &c.

Progress in mining education is being maintained, and the need for it is still urgent. The number of students taking the Mining Course at Sibpur College at the beginning of the session 1912–13 was 17. In the 1912 examination five gained diplomas. Lectures were delivered at four centres in the Bengal coal-fields. 260 students were registered in 1911–12, and 16 qualified for certificates. It is complained that the students are too deficient in previous education to make the most of these lectures. The Mining and Geological Institute of India, which was inaugurated at the end of 1905, now has 303 members. The ambulance movement made considerable headway.

# CHAPTER IX.

## MANUFACTURES.

INTRODUCTORY.
GOVERNMENT AND INDUSTRIAL DEVELOPMENT.
LARGE INDUSTRIES.
FACTORY LEGISLATION.
FACTORY INSPECTION.
PATENTS AND DESIGNS.

*(For further details see Statistical Abstract for British India, Tables 218 to 221.)*

## Introductory.

Although there is, as yet, practically no factory population in India such as exists in European countries, consisting of persons trained from their youth to one particular class of work and dependent on that for their livelihood, the advance of organised industries is profoundly affecting the condition of a large part of the population for whom factories offer an alternative employment to agriculture. In parts of Bombay it is reported that, owing to the demand for labour in the cotton mills, wages are no longer determined by agricultural conditions.

## Government and Industrial Development.

In recent years there has been much discussion in India regarding the advantages of encouraging manufactures for the purpose of securing greater diversity of occupation in a country that so largely depends on agriculture. The movement for promoting home industries, known as the *swadeshi* movement, has, in its legitimate forms, received official support. There are standing orders that stores required by Government shall, as far as practicable, be purchased in India, and preference is given to articles manufactured in India from Indian materials (or from imported materials), provided that the quality is sufficiently good and the price not unfavourable. Measures have been taken to restore and develop technical trades and industries; surveys of industrial conditions in almost all the major provinces have been published, besides various monographs on particular industries. Scholarships for the higher commercial and technical training of Indians abroad are offered by the Government and by private associations. In Madras, the United Provinces and Bengal the Directorship of Industries is a separate appointment. In Madras a leather expert has been appointed to superintend a leather-trade school; there is also a Dyeing school. In the United Provinces much has been done to encourage weaving, and some hand-loom factories have sprung up as a result; there is also a sugar-engineering expert and a Government loan has been granted for the erection of a large sugar factory at Gorakhpur. In Bengal the silk industry has received special attention, and a scheme has recently been started for the revival of cottage industries in the Central Provinces, especially weaving, tanning, and shoemaking.

Industrial conferences are held, some convened by the Local Governments, and others non-officially, such as the annual Indian Industrial Conference, which was held in December 1912 at Bankipore.

## Large Industries.

In this chapter attention must be mainly confined to the larger industries, concerning which alone statistical information is available. By far the most important of these are the cotton and jute manufacturing industries, which have made rapid progress in recent years, as the following figures show:—

(Large Industries.)

| Year. | Cotton Mills.* | | | | Jute Mills. | | | |
|---|---|---|---|---|---|---|---|---|
| | No. | Paid-up Capital. | Looms. | Spindles. | No. | Paid-up Capital. | Looms. | Spindles. |
| | | £ | | | | £ | | |
| 1883–4 | 71 | 5,428,000 | 15,412 | 1,842,184 | 23 | 2,124,000 | 6,139 | 112,650 |
| 1888–9 | 98 | 6,166,000 | 19,288 | 2,504,666 | 25 | 2,599,000 | 7,419 | 151,207 |
| 1893–4 | 125 | 7,504,000 | 26,876 | 3,338,229 | 27 | 2,701,000 | 9,180 | 191,228 |
| 1898–9 | 158 | 10,070,000 | 34,775 | 4,261,520 | 33 | 3,821,000 | 13,421 | 279,482 |
| 1903–4 | 187 | 10,428,000 | 41,997 | 4,900,106 | 38 | 4,954,000 | 18,400 | 376,718 |
| 1908–9 | 212 | 12,604,000 | 69,791 | 5,623,542 | 56 | 7,413,000 | 29,525 | 607,458 |
| 1909–10 | 223 | 12,725,000 | 74,757 | 5,780,124 | 60 | 7,674,000 | 31,418 | 645,862 |
| 1910–11 | 230 | 13,437,000 | 78,984 | 5,961,950 | 58 | 7,667,000 | 33,169 | 682,527 |
| 1911–12 | 234 | 13,799,000 | 81,899 | 6,040,760 | 59 | 7,953,000 | 32,027 | 677,519 |
| 1912–13 | 241 | 14,045,000 | 85,676 | 6,100,632 | 61 | 7,977,000 | 34,033 | 708,716 |

* The figures in this table relate to British India only (Native States and Pondicherry being excluded).

**Cotton Mills.**—The 266 cotton mills at work in all India in 1912-13 included 104 exclusively spinning, and 21 exclusively weaving mills. The majority of the mills, viz., 176, were in the Bombay Presidency, and they contained 70 per cent. of the spindles and 77 per cent. of the looms. Bombay City contained 85 mills and Ahmedabad 59. The industry is to a large extent in the hands of Indians.

The outturn of yarn in recent years in British India is shown in the margin. The mills of the Bombay Presidency produced nearly 75 per cent. of the total; Madras, the United Provinces, Bengal, and the Central Provinces, each between 5 and 7 per cent. Yarns of counts above 25 are spun chiefly in Bombay and Madras. Imports of yarn amount to only about 7 per cent. of the Indian production, of which a very small proportion is of counts under 25. The remarkable activity of the cotton industry in 1905–6 was followed by a decline in prosperity during 1906–7. Revival of the demand from China—the principal market for Indian yarn—during 1908–9 and 1909–10 was more than counteracted by the unprecedented rise in the price of raw material, and the total output continued to decrease until 1911–12. In that year, however, there was a revival, and the output for 1912–13 nearly reached the 1905–6 figure.

| Year. | Counts Nos. 1 to 25. | Above No. 25. | Total. |
|---|---|---|---|
| | Million Lbs. | Million Lbs. | Million Lbs. |
| Average: 1896–7 to 1900–1 | 423·9 | 20·1 | 444·0 |
| 1901–2 to 1905–6 | 537·4 | 39·9 | 577·3 |
| 1906–7 to 1910–11 | 555·4 | 53·6 | 608·9 |
| Year 1911–12 | 531·7 | 59·2 | 590·8 |
| „ 1912–13 | 589·1 | 61·5 | 650·6 |

Owing to the vicissitudes of the spinning business increased attention has been devoted to weaving, which has greatly extended, the figures showing an almost continuous increase, which was well maintained in 1912–13. The production of woven goods in recent years in British India only is given in the margin. Weaving is concentrated to an even greater degree than spinning in the Bombay mills, which in 1912–13 produced about 87 per cent. of the total output of cloth; the Central Provinces, the United Provinces and Madras, each between 3 and 4½ per cent. As the marginal table shows, there is a decided tendency to increase the output of other and finer fabrics than grey and bleached goods; in Madras the greater part of the output is of the finer kind. About 7 per cent. of the cotton piece-goods produced was exported.

| Year. | Grey. | Other kinds. | Total. |
|---|---|---|---|
| | Million Lbs. | Million Lbs. | Million Lbs. |
| Average: 1896–7 to 1900–1 | 80·6 | 11·3 | 91·9 |
| 1901–2 to 1905–6 | 109·9 | 25·0 | 134·9 |
| 1906–7 to 1910–11 | 154·1 | 40·0 | 194·1 |
| Year 1911–12 | 193·0 | 59·1 | 252·1 |
| „ 1912–13 | 196·1 | 71·5 | 267·6 |

**Jute Mills.**—While the cotton mills are largely owned by Indians and are mainly situated in Western India, jute mills are nearly all concentrated in Bengal in the

**(Large Industries.)**

vicinity of Calcutta, and are mostly in the hands of British firms. As will be seen from the statistical table above, the jute industry is of smaller dimensions than the cotton industry, but it has enjoyed almost uninterrupted and increasingly rapid progress, the number of looms and spindles having nearly doubled in the last decade. The production of the mills (as seen by the increase in exports) has increased even faster than the number of looms and spindles. The number of persons employed in 1912–13 was 204,092. The paid-up capital employed by these mills, including debentures, was £9,972,000, of which about 3 millions represent sterling capital.

**Woollen Mills.**—There were four woollen mills at work at the end of 1912, containing 876 looms and 32,832 spindles, and producing goods valued at about £325,000 for the year. The growth of the industry is slow, but, since 1907, has been regular. The fabrics consist chiefly of cloth for the army and the police. The produce of Indian mills represents only a small share of the total trade in woollen goods, for, although the demand for woollen goods in India is not very large, certain varieties can be produced much more easily and cheaply by European mills. There are many small hand-loom factories for weaving carpets and rugs, whose production is in the aggregate extensive.

**Paper Mills.**—There were eight paper mills at work at the end of 1912, producing during the year about 60 million lbs. of paper, valued at £513,700. Most of the official foolscap, blotting paper, notepaper, and envelopes is now obtained locally; but the development of paper-making in India has been checked by the competition of cheap wood-pulp paper from Europe.

**Breweries.**—At the end of 1912 there were 22 breweries, which produced during the year 3,849,000 gallons of beer. Eight of these are in the Himalayas. The largest brewery is at Bangalore, and its output was 474,000 gallons. The quantity of beer imported in 1912 was 4,521,260 gallons.

**General Remarks.**—The total number of factories worked by mechanical (including electrical) power, owned by companies or private persons in British India and returned as registered under the Act was 2,563 in 1911. A classified list of the more important is given in the margin. This does not include factories not worked by mechanical power, employing 74,476 persons. Of the 1,166 factories for the ginning, cleaning, and pressing of cotton there were 289 in Berar, 380 in Bombay, 135 in the Punjab, and 133 in the United Provinces. In Bombay about 194,000 operatives were employed in different branches of the cotton industry. In Madras and the Central Provinces and Berar, as in Bombay, cotton weaving and spinning are the principal industries. In Bengal there is an increasing number of jute presses. Silk filatures are found chiefly in Bengal and indigo and lac factories in Bihar and Orissa. Flour mills are most numerous in the Punjab and sugar factories in the United Provinces and Bihar. Rice mills and saw mills are most numerous in Burma, rice and teak being the two principal products of the province. They are mainly in European hands and are the only large industries in Burma organised and worked by western methods. Printing presses are numerous in Bombay, and Madras. Iron and brass foundries (including engineering workshops) number 30 in Bengal and 22 in Bombay. The Tata Iron and Steel works in Chota Nagpur commenced work early in 1912 and have since been considerably expanded. Their pig-iron has found a market in Japan and some has been bought by America. There were 119 factories belonging to the State and to local bodies. Among these were 19 printing presses, 23 railway workshops, 12 canal foundries and engineering workshops, and 17 military arsenals and factories. A marked feature in Madras and the United Provinces is the erection of many small power plants for purposes of agriculture and rural industries.

| — | No. of Works. | *No. of Operatives. |
|---|---|---|
| Cotton presses | 1,166 | 89,751 |
| Cotton mills | 235 | 217,279 |
| Jute presses | 115 | 30,207 |
| Jute mills | 60 | 194,085 |
| Silk filatures and silk mills | 63 | 9,032 |
| Rice mills | 219 | 21,010 |
| Flour mills | 38 | 3,034 |
| Sugar factories | 25 | 6,400 |
| Saw mills | 102 | 9,763 |
| Iron and brass foundries | 85 | 24,151 |
| Indigo factories | 49 | 16,510 |
| Tile-factories | 28 | 4,042 |
| Printing presses | 60 | 13,237 |
| Railway workshops, &c. | 59 | 72,965 |
| Petroleum Refineries | 7 | 9,389 |
| Lac factories | 34 | 3,816 |

* Including operatives in certain factories not included in the Factory Act returns.

## Factory Legislation.

Up to 1 July 1912 the law regulating factories in India was Act XI. of 1891. This Act applied with certain exceptions to all factories employing 50 hands and upwards and might be applied to factories employing 20 hands and upwards. For children from 9 (the minimum age) to 14, the maximum number of hours' work a day was 7, and for women 11, with 1½ hours' interval. A mid-day stoppage was compulsory, save where the work was in shifts.

In 1906 a small committee was appointed to conduct a preliminary enquiry into the conditions of labour in textile factories, and their conclusions formed the basis of an investigation by a representative Commission, whose report was presented to Parliament in 1908 (Cd. 4292). This report disclosed the existence of abuses, particularly in connection with the employment of children, and the excessive hours worked by operatives generally, in textile factories. The majority of the Commission deprecated a statutory limitation of the working hours of male adults. But they recommended the formation of a class of "young persons," between 14 and 17 years of age, whose hours should be limited to 12, and considered that this would indirectly secure a 12 hours' day for male adults. They also recommended that the hours of work for children should be reduced from 7 to 6 hours and that the hours for women should be assimilated to those for "young persons," night-work being prohibited for both classes. They recommended that children should be certified as to age and physical fitness.

The various recommendations having been considered by the Government of India and the Local Governments, an Act was passed (Act XII. of 1911) to amend and consolidate Factory Law. It came into force on 1st July 1912, and covers seasonal factories to which the old Act did not apply.

Besides provisions regarding the safety and health of operatives in factories generally, it provides that in textile factories no person shall be actually employed for more than 12 hours a day, and no child for more than 6 hours, and that, save where there is an approved system of shifts (and subject to certain other exceptions), no person shall be employed before 5.30 a.m. or after 7 p.m. No woman in any factory may be employed for more than 11 hours.

The Commission having reported that there was a widespread evasion of regulations owing to insufficiency of whole-time inspectors, the inspecting staff has been reorganised; and the inspecting staff, which in 1908 was 6, numbered 14 on 31 March 1913 (of whom 5 were in Bombay).

## Factory Inspection.

The statistics of the factories inspected during 1912 are as follows:—

| | No. of Factories working and liable to be inspected. | Average No. of Hands employed daily. | | No. of Persons convicted of breach of Act. | No. of Accidents reported. |
|---|---|---|---|---|---|
| | | Children. | Adults. | | |
| Bengal | 322 | 2,231 | 292,856 | 7 | 1,113 |
| Bihar and Orissa | 26 | 471 | 23,251 | — | 122 |
| Assam | 16 | 164 | 2,737 | — | 4 |
| United Provinces | 226 | 1,693 | 53,110 | 14 | 290 |
| Punjab | 234 | 846 | 32,019 | 4 | 264 |
| North West Frontier | 5 | — | 241 | — | — |
| Burma | 438 | 842 | 49,881 | 1 | 349 |
| Central Provinces | 171 | 1,825 | 22,621 | 2 | 109 |
| Berar | 308 | 427 | 22,396 | 57 | 63 |
| Madras | 268 | 5,709 | 59,482 | 3 | 466 |
| Bombay | 687 | 14,344 | 245,501 | 16 | 1,591 |
| Ajmere-Merwara | 9 | 244 | 11,752 | — | 137 |
| Total | 2,710 | 53,796 | 815,847 | 104 | 4,508 |

Owing to the fact that the new Act covers factories which are open during only a part of the year, the number of factories is much greater than in previous years. The new Act has been introduced without much difficulty, though in the Punjab it is complained that the managers have not taken the trouble to acquaint themselves with the new rules. In Bengal and Bombay, which contain by far the largest part of the

(Factory Inspection.)

factory population, there has been a marked absence of friction. Partly this is due to the prosperity of the season which has obviated the necessity for reducing wages in cases where the new Act has necessitated a shortening of hours. In Bengal there were a few strikes where a reorganisation of working hours consequent on the Act led to a reduction in the number of hands. The chief difficulty is with children who, by means of a second certificate obtained under a false name, do two shifts a day, thus exceeding the six-hour limit. As regards sanitation and accidents the year was satisfactory. The automatic stop-gear, which is now compulsory in jute mills, has obviated accidents from jute-softening machines.

A committee is conducting enquiries into the question of the ventilation of textile factories.

## Patents and Designs.

In view of the growing volume of patent work a new Patent and Designs Act, assimilating the Indian law more closely to that of the United Kingdom, was passed in March 1911, and came into force in January 1912. As compared with the Act previously in force (Act V. of 1888) it provides a simpler, more direct, and more effective procedure in regard to the grant of patents and to their subsequent existence and operation, and reduces the fee for the registration of designs. It encourages the inventor, while giving better protection to him and to the public.

The subjects of the patents applied for in 1912 were chiefly chemical appliances and preparations, railways, electric contrivances, bicycles, spinning and weaving machines, and building materials.

The following are the principal statistics for patents:—

| | Total Number of Applications | | Number of Applications from | | |
|---|---|---|---|---|---|
| | Received. | Accepted. | Indians. | Other residents in India. | Persons not resident in India. |
| 1911 - - - | 807 | 528 | 64 | 142 | 601 |
| 1912 - - - | 678 | 437 | 50 | 120 | 508 |

There were 333 designs registered as against 77 in 1911.

# CHAPTER X.

## TRADE.

*(Detailed information regarding the Trade of British India is annually furnished in three Parliamentary Bluebooks; Tables of the Trade of British India, Review of the Trade of India, and Statistical Abstract for British India, Tables* 136 *to* 184.)

### Foreign Seaborne Trade.

This section deals only with the trade of British Indian ports, and excludes the trade of certain native States on the west coast, the trade of French and Portuguese possessions, and the contents of registered letters.

The foreign seaborne trade of India has greatly increased during the last 30 years, as the marginal figures relating to private merchandise show (values in thousands of pounds at 15 rupees to the pound). The percentage growth has been greater in imports, though the actual increase has been larger in exports.

| Year. | Imports. | Exports of Indian Merchandise |
|---|---|---|
| Average— | 000£ | 000£ |
| 1880–1 to 1884–5 | 33,754 | 52,964 |
| 1885–6 „ 1889–90 | 40,798 | 59,168 |
| 1890–1 „ 1894–5 | 45,647 | 67,623 |
| 1895–6 „ 1899–1900 | 46,956 | 69,100 |
| 1900–1 „ 1904–5 | 53,745 | 87,336 |
| 1905–6 „ 1909–10 | 77,281 | 111,874 |
| For the year 1910–11 | 86,236 | 137,081 |
| „ 1911–12 | 92,383 | 147,879 |
| „ 1912–13 | 107,327 | 160,899 |

The foreign seaborne trade of British India during the five years to 31st March 1913 was as follows :—

| | 1908-09. | 1909-10. | 1910-11. | 1911-12. | 1912-13. |
|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ |
| Imports : | | | | | |
| Private Merchandise | 80,849,618 | 78,040,286 | 86,236,011 | 92,383,255 | 107,327,923 |
| Government Stores | 5,008,302 | 3,727,226 | 2,901,152 | 3,653,703 | 3,743,877 |
| Total Merchandise | 85,857,920 | 81,767,512 | 89,137,163 | 96,036,958 | 111,070,902 |
| Treasure, Private | 15,087,902 | 24,950,716 | 26,444,723 | 35,614,729 | 34,132,022 |
| „ Government | 74,876 | 64,933 | 45,853 | 32,503 | 7,089,166 |
| Total Treasure | 15,162,778 | 25,015,649 | 26,490,576 | 35,647,232 | 41,221,188 |
| Total Imports | 101,020,698 | 106,783,161 | 115,627,739 | 131,684,190 | 152,292,090 |
| Exports : | | | | | |
| Private Merchandise : | | | | | |
| Foreign Produce and Manufactures | 2,113,820 | 2,259,090 | 2,840,760 | 4,018,100 | 3,160,044 |
| Indian ditto | 99,904,842 | 122,997,605 | 137,080,646 | 147,879,063 | 160,899,289 |
| Government Stores | 76,801 | 55,428 | 53,056 | 96,041 | 86,221 |
| Total Merchandise | 102,095,463 | 125,312,123 | 139,974,402 | 151,993,204 | 164,145,554 |
| Treasure, Private | 3,971,116 | 4,262,221 | 4,745,327 | 6,907,746 | 4,697,193 |
| „ Government | 242,382 | 3,807 | 5,956 | 8,194 | 2,390,651 |
| Total Treasure | 4,213,498 | 4,266,028 | 4,751,283 | 6,915,987 | 7,087,844 |
| Total Exports | 106,308,961 | 129,578,151 | 144,725,685 | 158,909,191 | 171,233,398 |
| Total Sea-borne Trade | 207,329,659 | 236,361,312 | 260,353,424 | 290,593,381 | 323,525,488 |
| Net Exports of Merchandise | 16,237,543 | 43,544,611 | 50,837,239 | 55,956,246 | 53,074,652 |
| Net Imports of Treasure | 10,949,280 | 20,749,621 | 21,739,293 | 28,731,245 | 34,133,344 |
| Net excess of Exports (balance of trade) | 5,288,263 | 22,794,990 | 29,097,946 | 27,225,001 | 18,941,308 |

A succession of good seasons in India, and the exceptional activity of the world's commerce, combined to produce an unprecedented expansion of Indian trade.

**(Foreign Seaborne Trade.)**

**Principal Imports and Exports.**—The following table shows the values of the chief articles of merchandise imported and exported during the last three years (in thousands of pounds):—

| Principal Imports. | | | | Principal Exports (Indian Merchandise). | | | |
|---|---|---|---|---|---|---|---|
| Articles. | 1910–11. | 1911–12. | 1912–13. | Articles. | 1910–11. | 1911–12. | 1912–13. |
| | 000£ | 000£ | 000£ | | 000£ | 000£ | 000£ |
| Cotton goods (including twist and yarn). | 29,893 | 33,047 | 40,548 | Cotton, raw | 24,037 | 19,684 | 18,890 |
| Metals | 9,597 | 9,473 | 10,328 | Rice | 15,487 | 19,366 | 21,704 |
| Sugar | 8,784 | 7,960 | 9,519 | Jute, raw | 10,327 | 15,038 | 18,034 |
| Railway material | 2,830 | 2,958 | 4,269 | ,, manufactures | 11,330 | 10,672 | 15,247 |
| Machinery and millwork | 3,359 | 3,041 | 3,611 | Seeds | 17,275 | 18,720 | 15,140 |
| Mineral oils | 2,249 | 2,818 | 2,502 | Wheat and wheat-flour | 9,060 | 9,430 | 12,514 |
| Hardware | 1,930 | 2,084 | 2,279 | Hides and skins | 8,723 | 9,286 | 10,914 |
| Woollen goods | 2,013 | 2,272 | 2,039 | Tea | 8,278 | 8,631 | 8,863 |
| Silk manufactures | 1,843 | 1,769 | 2,035 | Opium | 8,509 | 8,726 | 7,481 |
| Provisions | 1,211 | 1,292 | 1,566 | Cotton manufactures | 7,341 | 6,519 | 8,134 |
| Raw cotton | 128 | 1,391 | 1,483 | Barley | 69 | 1,498 | 3,705 |
| Liquors | 1,265 | 1,293 | 1,422 | Wool, raw | 1,891 | 1,724 | 1,756 |
| Glass and glassware | 1,045 | 1,029 | 1,169 | Metals and ores | 935 | 1,050 | 1,479 |
| Spices | 1,028 | 1,029 | 1,169 | Lac | 1,429 | 1,343 | 1,409 |
| Apparel | 930 | 1,027 | 1,074 | Pulse | 675 | 1,346 | 1,119 |
| Dyeing and tanning materials. | 896 | 841 | 1,014 | Coffee | 888 | 897 | 1,044 |

**Imports of Merchandise.**—The very large increase in cotton imports is due to the expansion of Indian purchasing power coupled with a fall in prices. A fall in prices also stimulated the sugar imports, although the Indian sugar crop was above the average, and Indian production is increasing owing to extended cultivation and improved methods. The world's iron trade was active, and the increase under metals was chiefly iron and steel. Machinery is recovering from a long depression—the after-effects of the general depression of 1907 and the years following. The curtailment of hours under the new Factory Act is said to be stimulating the use of more efficient machinery in textile mills. Railway material, if we include imports on Government account, amounted to £4·64 millions in 1911–12 and £5·96 millions in 1912–13, the increase being chiefly under rolling stock. Imports of mineral oils fell off owing to the rise of prices, which had been abnormally low during the rate-war between the Standard and Shell interests. The continued increase under raw cotton is due to Indian manufacturers taking up the production of finer goods, for which native cotton is unsuitable.

**Exports of Indian Merchandise.**—The table brings out clearly the immense preponderance of raw agricultural produce amongst Indian exports, and the figures fluctuate widely according to the character of the season. The favourable season of 1911–12 caused a large expansion of rice exports, which was further enhanced by shortage of rice in the Far East. The rise in wheat reflects the excellent harvest of 1911–12. Among other food grains, Indian barley is rapidly acquiring a remarkable popularity in Europe, and the poor crop in Europe caused an enormous increase of exports. The Indian outturn of cotton was better than in 1911–12 but the amount exported was rather less. For jute the season was the most prosperous on record, the crops both of 1912 and 1913 having been good and demand having been brisk. Oil-seeds declined, prices being low: ground nuts (which are gaining popularity as a crop in Madras) alone made good progress. The tea crop was a record.

Further details with regard to the trade in some of the principal agricultural products are given in Chapter V.

**Re-Exports.**—The value of foreign merchandise re-exported from India is relatively small, and the trade is not progressive. Of the total in 1912–13, £1,098,000 worth of cotton goods, shipped chiefly to the Persian Gulf, Arabia, East Africa, &c., formed about a third.

**Trade by Countries.**—In the following table imports are classified according to the countries whence they were consigned to India, and exports to the countries to which

they were consigned, *i.e.*, to the countries of final destination so far as known. This system was introduced in 1907–08, before which year they used to be shown according to the countries containing the port of shipment or discharge. The chief result of the change is that a large mass of imports previously shown as coming from Belgium is now correctly shown as coming from Germany.

The share of the United Kingdom in the total trade of 1912–13 in private merchandise was 40 per cent.; that of Germany was 8·5; of China, 5·8; of France, 4·4; of the United States 5·9; of Belgium, 4; of Japan, 5·6. Taking imports and exports separately, about 63 per cent. of the import trade (exclusive of Government stores) and 25 per cent. of the export trade was conducted with the United Kingdom. In consequence, however, of the re-exports of Indian produce, the proportion retained in England is considerably lower. The proportion of the trade assignable to other parts of the British Empire cannot be stated accurately, since the large transactions with Ceylon, the Straits Settlements, and Hong Kong, which are chiefly distributing centres, are really for the most part trade with foreign countries. As regards the self-governing colonies, the largest trade was done with Australia (£2,594,000).

The value of India's trade in private merchandise with the chief countries, for the last three years, has been as follows (in thousands of pounds):—

| Countries. | Imports from | | | Exports to | | |
|---|---|---|---|---|---|---|
| | 1910–11. | 1911–12. | 1912–13. | 1910–11. | 1911–12. | 1912–13. |
| | 000£ | 000£ | 000£ | 000£ | 000£ | 000£ |
| United Kingdom | 52,725 | 57,635 | 67,623 | 34,688 | 40,055 | 41,226 |
| Germany | 5,596 | 5,969 | 6,869 | 13,171 | 15,106 | 16,622 |
| China (including Hong-Kong) | 1,614 | 1,643 | 2,011 | 12,812 | 12,240 | 13,684 |
| United States | 2,325 | 3,527 | 3,469 | 9,067 | 10,445 | 12,586 |
| Belgium | 1,477 | 1,542 | 2,029 | 7,373 | 8,905 | 8,778 |
| France | 1,305 | 1,427 | 1,453 | 10,140 | 9,176 | 10,524 |
| Japan | 2,248 | 2,318 | 2,711 | 9,003 | 11,163 | 12,489 |
| Straits Settlements | 2,069 | 1,985 | 2,057 | 5,186 | 5,857 | 6,129 |
| Austria-Hungary | 1,928 | 1,771 | 2,352 | 4,950 | 5,076 | 4,856 |
| Ceylon | 472 | 461 | 504 | 5,309 | 5,695 | 6,119 |
| Italy | 857 | 839 | 1,048 | 5,364 | 4,225 | 4,629 |
| Mauritius | 2,016 | 1,277 | 2,159 | 869 | 973 | 925 |
| Turkey | 423 | 416 | 380 | 1,556 | 1,724 | 1,695 |
| Java | 6,034 | 6,314 | 6,359 | 2,394 | 2,851 | 2,168 |

The trade with China consists mainly in the exportation thereto of cotton yarn, raw cotton, tea, and jute goods, while silk and silk goods are imported. Germany sends chiefly cotton goods, woollen goods, oils, liquors, glassware, paper, steel, iron, copper and other metals, hardware, dyes, machinery, &c. in exchange for raw cotton and jute, raw hides and skins, rice and other grains, oilseeds, &c. She buys far more than she sells to India. Belgium takes raw cotton, oilseeds, manures, manganese ore, jute, rice, barley, &c. in exchange for iron, steel, dyes, glass, hardware, cotton goods, &c. France buys large quantities of raw jute and cotton, wheat, coffee, raw silk, hides and skins, and oilseeds, and sells apparel, silk goods, and liquors. The United States buys large quantities of seeds, manganese ore, saltpetre, jute, raw and manufactured, hides and skins, and lac, and sells mineral oil, hardware, machinery, cotton goods, and iron and steel.

*Trade of Chief Ports.*—The table in the margin shows the proportionate share of the five chief ports in the private trade with foreign countries in merchandise only. The value of the exports from Calcutta was greater through increases under jute, hides, metals, raw cotton, and grain and pulse. Opium and oilseeds declined. Imports increased under all the important heads, especially cotton goods, metals and machinery, and sugar. Exports from Bombay decreased, owing to large decreases in raw cotton and seeds. Imports increased chiefly under the heads cotton goods, railway materials and sugar. The trade of Karachi expanded greatly, sugar and textiles among imports, and wheat, barley and raw cotton among exports showing the largest increases.

| Port. | 1911–12. | 1912–13. |
|---|---|---|
| | Per Cent. | Per Cent. |
| Calcutta | 37·7 | 38·3 |
| Bombay | 27·7 | 28·4 |
| Karachi | 10·8 | 11·7 |
| Rangoon | 8·9 | 8·9 |
| Madras | 3·1 | 4·4 |

(Foreign Seaborne Trade.)

**Treasure.**—The net import of gold fell from £25,173,000 in 1911–12 to £22,668,000. That of silver rose from £3,557,000 to £11,466,000. The apparent absorption of gold by India has increased largely in the last two years. The increased imports of silver were due to Government requirements for coinage.

## Land Frontier Trade.

The statistics of land frontier trade shown in the margin include a great deal of trade that is not strictly foreign. Owing to difficulties of registration accurate returns are impossible, but there is a large and increasing trade with Afghanistan, Nepal, Western China, Tibet, Bhutan, and Siam. The principal exports from India are cotton yarn and manufactures (chiefly foreign), metals, and provisions; and the chief imports into India rice and other grains, provisions, fruits, living animals, wool, hides and skins, oilseeds, and timber.

| Year. | Imports. | Exports. | Total. |
|---|---|---|---|
| | 000£ | 000£ | 000£ |
| 1910–11 | 6,127 | 4,950 | 11,077 |
| 1911–12 | 6,920 | 5,885 | 12,805 |
| 1912–13 | 7,660 | 6,986 | 14,646 |

## Coasting Trade.

The trade in merchandise carried by coasting vessels amounted to £42,330,000 in 1912–13, or about 8 per cent. more than in 1911–12. This amount is arrived at by adding to the value of the goods carried from one British Indian port to another the sum of the imports and exports in the trade between British and non-British ports in India. The principal items are rice and mineral oil exported from Burma, and cotton (raw and piece goods) from Bombay. Of these, rice and mineral oil showed the largest increase. The trade is handicapped by the high rate of coasting freights.

## Shipping.

During 1912–13 the number of steamers and sailing vessels with cargoes and in ballast which entered from and cleared to all countries was 8,737, with a tonnage of 17,451,985 as compared with 16,616,435 in 1911–12. Of the total, 98·8 per cent. was steam tonnage. Tonnage under the British flag represented about 77·4 per cent. of the whole.

The number of vessels under the principal flags is given below. The most striking feature is the increase in the number of Japanese vessels :—

| Nationality. | 1908–09. | 1909–10. | 1910–11. | 1911–12. | 1912–13. |
|---|---|---|---|---|---|
| British | 4,238 | 4,722 | 4,751 | 5,117 | 5,129 |
| German | 437 | 455 | 419 | 472 | 503 |
| Austro-Hungarian | 156 | 220 | 208 | 213 | 245 |
| Japanese | 79 | 63 | 77 | 121 | 197 |
| Norwegian | 106 | 95 | 104 | 134 | 131 |
| Italian | 76 | 81 | 84 | 83 | 90 |
| French | 55 | 56 | 56 | 58 | 47 |

## Freights.

The following statement gives minimum quotations for typical rates of freight per ton from the chief Indian ports to London for each of the last five years, taking in each case the month when the largest quantity of the commodity is ordinarily shipped :—

| | 1909. | 1910. | 1911. | 1912. | 1913. |
|---|---|---|---|---|---|
| | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| Calcutta—Rice | 0 15 0 | 1 0 0 | 0 18 9 | 1 6 3 | 1 12 6 |
| Wheat | 1 0 0 | 1 1 3 | 1 0 0 | 1 10 0 | 1 6 3 |
| Linseed | 1 0 0 | 1 0 0 | 1 2 6 | 1 12 6 | 1 6 3 |
| Tea | 1 12 6 | 1 12 6 | 1 12 6 | 1 15 0 | — |
| Jute | 1 2 6 | 1 6 3 | 1 12 6 | 1 17 6 | — |
| Bombay—Cotton | 0 11 0 | 0 16 6 | 0 15 0 | 1 0 0 | 1 0 0 |
| Wheat | 0 12 0 | 0 14 6 | 0 15 6 | 0 19 0 | 1 0 6 |
| Seeds | 0 15 0 | 0 15 0 | 0 16 0 | 1 2 0 | — |
| Karachi—Wheat | 0 14 0 | 0 14 6 | 0 17 0 | 1 1 0 | 0 18 6 |
| Rangoon—Rice | — | — | 1 3 6 | 1 12 6 | 1 5 0 |

## Working of the Merchandise Marks Act.

*(For further details, see Statistical Abstract for British India, Table* 185.)

The Indian Merchandise Marks Act (IV. of 1889) was passed to prevent the fraudulent sale of goods bearing false trade marks or false trade descriptions (as of origin, quality, weight, or quantity). The Act also requires that all piece-goods must be stamped with their length in yards. Out of 2,346 detentions under the Act in 1912–13, 481 were on account of counterfeit trade marks or false trade descriptions, 1,580 for non-description or false description of origin, and 285 for unstamped or insufficiently stamped piece-goods. Detention is rarely followed by confiscation. Goods were released with a fine in 1,445, and without a fine in 900, cases.

## Joint Stock Companies.

*(For further details, see Statistical Abstract for British India, Tables* 216, 217.)

At the end of 1912–13 there were 2,499 joint stock companies at work in British India with a paid-up capital of £47,797,424. The increase during the year was, in number, 89; and, in capital, £1,773,000. The paid-up capital has doubled since 1900–01. The companies are most numerous and important in the provinces of Bengal and Bombay, which each possess 38 per cent. of all the paid-up capital, while the share of Burma, which comes next, was 8 per cent. of the whole. The average of paid-up capital is highest in Burma, where it amounts to £31,200, while in Bombay it is £30,900. In Madras the average is low, as 232 money-lenders, mostly carrying on a small business, are registered under the Companies Act. The distribution of paid-up* capital among registered companies of the different classes was as follows:—

| | £ | | £ |
|---|---|---|---|
| Banking loan and insurance | 5,742,289 | Mills and presses - - - | 18,375,488 |
| Trading and shipping - | 11,139,986 | Tea and planting - - - | 2,813,146 |
| Mining and quarrying - | 7,676,131 | Other industries - - - | 2,050,384 |

As will be seen, the largest aggregate paid-up capital, constituting nearly two-fifths of the total, was invested in cotton, jute, and other mills and presses; and about 50 per cent. of the capital of such undertakings was invested (mostly in cotton mills and presses) in Bombay Presidency. Over a third of the capital of trading companies is invested in railways and tramways. The capital invested in mining companies has quadrupled in the last eight years.

At the end of 1912 there were, so far as is known, 350 companies which carried on work with sterling capital exclusively, or almost exclusively, in British India, but which were registered elsewhere, and their paid-up capital amounted to £73,503,468, besides £43,484,448 debentures. The railways and tramways represented £34,175,825 paid-up capital and £37,468,351 debentures. Of the rest the sterling capital (including debentures) invested in the tea industry was about 16 million; in mines, 9 million; in jute mills, 5 million; in rice mills, 2 million; and in cotton mills, £400,000. Thus, while the railway, mining, and tea concerns are mainly financed from abroad, the great bulk of the mill and press companies are registered in India. During 1912–13 two new Acts—the Life Assurance Companies Act and Provident Insurance Societies Act—came into operation which have had a certain effect in checking the growth of unsound companies. The new Companies Act came into force 1st April 1914.

* Share capital only. The total value of the debentures issued amounted in June 1913 to £6,305,800.

# CHAPTER XI.

# PUBLIC WORKS.

## General.

The operations included under the head of "Public Works" are of three kinds, viz., Railways, Irrigation, and Buildings and Roads. The Railway Department is an Imperial service under the control of the Government of India, or of the Railway Board, in so far as the powers of the Government of India have been delegated to it. The establishment employed on irrigation and on buildings and roads is subdivided according to Provinces, and controlled by the local administrations, in subordination to the Supreme Government. Under the head of "Buildings and Roads" are included many miscellaneous works, such as improvements in towns, paving, water supply and drainage, harbours, lighthouses, &c.

The annual expenditure on public works is met partly from money raised by loan and partly from the ordinary revenues of the year. The class of works on which borrowed money is expended comprises the railways and large irrigation works, which are expected to yield sufficient net revenue to cover the interest on the capital expended on them. For the railways and more important irrigation systems, distinct capital and revenue accounts are kept, but for the smaller works of irrigation and most of the works included in the class of buildings and roads, such accounts are not kept, though a distinction is made in the accounts between expenditure on new works and expenditure on repairs to existing works.

The following statement of the total receipts and expenditure under the head of "Public Works" for 1912–13 is compiled from the Finance and Revenue Accounts :—

| | Receipts. | Expenditure. | | |
|---|---|---|---|---|
| | | | Charged to Revenue. | Not charged to Revenue. |
| | £ | | £ | £ |
| Railways - - - | 36,763,518 | Construction - - - - | 4,266 | 8,812,895 |
| | | „ from Famine Relief Grant | 41,411 | — |
| | | On Revenue Account - - - | 31,960,163 | — |
| Irrigation - - | 4,411,217 | Construction - - - - | — | 1,408,329 |
| | | „ from Famine Relief Grant | 426,501 | — |
| | | On Revenue Account - - - | 3,301,928 | — |
| Other Public Works - | 355,447 | Civil Works - - - - - | 6,059,503 | — |
| | | Initial expenditure on new capital at Delhi. | — | 114,894 |
| TOTAL - - | 41,530,182 | | 41,793,772 | 10,336,118 |

The expenditure charged against revenue includes the following items of "Interest on Debt" :—Railways, £6,683,164 ; Irrigation, £1,282,513.

Of the permanent public debt on the 31st of March 1912, £211,832,819 is classed as incurred for railways and £37,552,030 for irrigation.

The amount paid under the head of "Annuities in purchase of railways," which is included in the Railway Revenue Account is £3,357,672.

(Railways.)

The following statement shows the strength of the superior engineer and upper subordinate establishments as they stood on the 30th June in 1913 and 1912:—

| | | Irrigation and Buildings and Roads. | | | Railways. | Total. |
|---|---|---|---|---|---|---|
| | | India. | Madras. | Bombay. | | |
| Civil Engineers (including Military Officers) | 1913 | 542 | 96 | 106 | 183 | 927 |
| | 1912 | 538 | 97 | 106 | 182 | 923 |
| Upper Subordinates | 1913 | 615 | 291 | 249 | 63 | 1,218 |
| | 1912 | 600 | 188 | 254 | 68 | 1,110 |

## Railways.

(*For further details see Statistical Abstract for British India, Tables 44 to 47, 68–9, 71, 74 to 78, 126 to 134.*)

**Financial Results to the State.**—In the financial year 1912–13 there was a net gain of £4,803,355. The table below is taken from the Finance and Revenue Accounts of the Government of India for 1912–13.

| | Imperial. | Provincial. | England. (Sterling converted at £1=Rs. 15.) | Total. |
|---|---|---|---|---|
| REVENUE. | £ | £ | £ | £ |
| Railways— | | | | |
| State railways—(Gross traffic receipts) | 36,677,904 | 8,173 | 287 | 36,686,364 |
| Subsidised companies—(Repayment of advances of interest). | 15,673 | — | 57,501 | 73,174 |
| Guaranteed railway—Net receipts | 3,980 | — | — | 3,980 |
| Total £ | 36,697,557 | 8,173 | 57,788 | 36,763,518 |
| EXPENDITURE. | | | | |
| Railway Revenue Account— | | | | |
| State Railways— | | | | |
| Working expenses | 18,676,451 | 5,636 | — | 18,682,087 |
| Share of surplus profits, &c. | 709,642 | — | — | 709,642 |
| Interest on debt | 3,075,896 | — | 3,607,268 | 6,683,164 |
| Annuities in the purchase of railways | — | — | 3,357,672 | 3,357,672 |
| Sinking funds | — | — | 184,438 | 184,438 |
| Interest chargeable against companies on advances. | 213,884 | — | 175,500 | 389,384 |
| Interest on capital deposited by companies | 199,041 | — | 1,655,020 | 1,854,061 |
| Subsidised companies— | | | | |
| Land, &c. | 32,738 | 936 | — | 33,674 |
| Miscellaneous railway expenditure | 65,775 | 266 | — | 66,041 |
| Total £ | 22,973,427 | 6,838 | 8,979,898 | 31,960,163 |

In the figures of expenditure are included all charges falling on the Government for the management and working expenses of railways, for interest on capital outlay, as well as for the gradual redemption (by charge to the revenue account) of the commuted capital of the East Indian, Eastern Bengal, Sind Punjab and Delhi, Great Indian Peninsula and Madras railways, through the agency of sinking funds and annuities, and of that portion of the Oudh and Rohilkund railway debt incurred in excess of the money raised through the agency of the "Discount" Sinking Fund. The figures also include charges for control, for land required by the companies, and for miscellaneous items, such as headquarters establishment and surveys.

**Statistical Results of Working.**—The statistical results of working the various classes of railways during 1912–13 are given in the following table. The aggregate net earnings of all Indian railways, including steamboat service and suspense items, but excluding indirect charges, produced a return of 6·48 per cent. on the total capital outlay on open lines, against 6·11 per cent. in the previous year:—

(Railways.)

| Class. | Length of Line open on the 31st March 1913. | Total Capital Outlay on Open Lines to the 31st March 1913, including Steamboat and Suspense. | Total Number of Passengers carried. | Total Weight of Goods carried. | Gross Earnings, including Steamboat Service. | Working Expenses, including Steamboat Service. | Net Earnings, including Steamboat Service. | Percentage of Net Earnings on Capital Outlay on Open Lines. |
|---|---|---|---|---|---|---|---|---|
| *All Gauges.* | Miles. | £ | No. | Tons. | £ | £ | £ | |
| State lines worked by the State | 7,023 | 84,372,200 | 95,553,800 | 21,687,000 | 9,863,667 | 5,405,533 | 4,458,134 | — |
| State lines worked by companies*- | 18,348 | 194,275,600 | 253,946,400 | 81,561,000 | 26,835,400 | 13,312,467 | 13,522,933 | — |
| Companies' lines guaranteed under modern contracts. | 32 | 201,267 | 431,560 | 85,000 | 29,667 | 14,867 | 14,800 | — |
| District Board's lines | 155 | 472,733 | 3,790,000 | 274,000 | 84,667 | 47,533 | 37,134 | — |
| Assisted companies' lines | 3,807 | 17,485,533 | 52,004,900 | 7,347,000 | 2,277,800 | 973,667 | 1,304,133 | — |
| Unassisted companies' lines | 69 | 122,867 | 858,600 | 217,000 | 16,733 | 10,733 | 6,000 | — |
| Lines owned by Native states and worked by companies. | 2,056 | 10,363,533 | 15,478,500 | 2,788,000 | 1,072,467 | 549,867 | 522,600 | — |
| Lines owned by Native States and worked by State railway agency. | 257 | 1,042,867 | 5,072,800 | 1,096,000 | 206,733 | 107,933 | 98,800 | — |
| Lines owned and worked by Native States. | 1,808 | 4,295,200 | 8,143,900 | 1,561,000 | 688,866 | 331,000 | 357,866 | — |
| Lines in foreign territory | 74 | 1,307,867 | 1,447,100 | 461,000 | 63,133 | 34,667 | 28,466 | — |
| TOTAL OF ALL RAILWAYS, 1912-13 | 33,599 | 313,939,667 | 436,697,500 | 86,977,000 | 41,139,133 | 20,788,267 | 20,350,866 | 6·48. |
| Ditto 1911-12 | 33,058 | 303,076,467 | 410,012,690 | 78,880,000 | 37,832,400 | 19,307,400 | 18,525,000 | 6·11 |

* The Birur-Shimoga, Hindupur, and Mysore-Nanjangud railways are included with the Mysore State railway under this classification, as separate figures for these lines are not available.

It will be observed that, with an increase of 541 miles, or 1·64 per cent. in the open mileage, as compared with 1911–12, the gross earnings increased by £3,306,733, or 8·74 per cent., and the working expenses by £1,480,867, or 7·67 per cent., resulting in an improvement of £1,825,866 in the net earnings.

**Mileage opened and under construction.**—The total railway mileage opened, under construction, and sanctioned for construction during the year was as follows :—

| Gauge. | Miles opened. | Miles sanctioned for construction. | Total Mileage under construction or sanctioned at the close of the Year. |
|---|---|---|---|
| 5′ 6″ gauge | 150 | 32 | 1,069 |
| 3′ 3⅜″ „ | 348 | 191 | 558 |
| 2′ 6″ „ | 59 | 173 | 843 |
| 2′ 0″ „ | — | 99 | 102 |
| Total | 557 | 495 | 2,572 |
| *Deduct* correction of mileage | 16 | | |
| Net total addition to open mileage | 541 | | |

**Important Works completed and in progress.**—Full particulars in regard to the works completed and in progress during 1912–13, and projects for new lines under consideration during the year, will be given in the Administration Report on Indian Railways for 1912–13, which will be published as a Parliamentary Paper. A few details of the more important works of the year are, however, given below.

Important works in progress during the year included the following :—

*B.B. and C.I. Railway.*—Construction of the Bayana-Agra and Broach-Jambusar lines (50 and 30 miles in length respectively).

*E.-Bengal Railway.*—Lower Ganges Bridge, near Sara. More than two-thirds of the total quantity of earthwork required for the approaches to the bridge has been completed. Work was somewhat delayed by late arrival of materials from England due to the strikes. The construction of the independent broad gauge line from Sara to Santahar (48 miles) is well in hand.

*E. Indian Railway.*—Construction of the Barharwa-Katwa railway, which was almost completed.

*G.I.P. Railway.*—The Itarsi-Budnoor section of Itarsi-Nagpur railway was opened to traffic on 1st May 1913; work on the other sections is well in hand.

*North-Western Railway.*—Work on the Kalabagh-Bannu (89 miles), and Jakhal-Hissar (53 miles) was approaching completion; and work on the Laki-Pezu-Tank line was begun.

*O. and R. Railway.*—Work on Cawnpore-Khirada section of Cawnpore-Banda railway is in hand.

*S. Indian Railway.*—Links and connected works for India-Ceylon connection made rapid progress in the year. (Formal opening took place on 25th February 1914.)

*Bengal and N.W. Railway.*—The Izat bridge over the Ganges (forty 150-foot spans) and the Bagaha bridge over the Gundah river were opened.

*Burma Railways.*—Work on first 72 miles of Southern Shan States railway progressed satisfactorily.

*Jodhpur-Bikaner Railway.*—Construction of the Jodhpur-Phalsdi line (79 miles) was in progress.

**Projects for new Lines.**—In connection with the projects for new lines the more important subjects which have been considered by Government include the following:—

*Laki-Pezu-Tank Railway.*—To connect Tank (in N.W.F. Province) with the Kalabagh-Bannu railway, now under construction, at Laki. This branch would permit of the establishment of a new cantonment and market at Tank if Dera Ismail Khan should have to be evacuated in consequence of the erosion on the west bank of the Indus and should tap the considerable traffic with Afghanistan which at present reaches India by way of the Gomal Pass.

*Railways in Rajputana.*—To provide an outlet to Karachi for the steadily expanding traffic from the United Provinces.

*Jind-Paniput Railway.*—To connect Jind, the capital of the State of that name, with Paniput on the Delhi-Umballa Kalka railway.

*Guntur-Tenali Chord.*—This and the Tenali-Repalle branch (which will be constructed at the cost of the Guntur District Board) should serve to carry the produce of the rich grain growing tract of the Tenali taluq (near Bezwada in the east of Madras) and to afford better means of communication for its dense population.

Proposals put forward by Durbars of Native States include projects for four small lines in the Baroda State, and for single lines in the states of Hyderabad, Mysore, Jaipur, and Navanagar.

**Rolling-Stock and Safety Appliances.**—For the year 1912-13 a provision of Rs. 465 lakhs was made for additional rolling-stock for open lines. This provision is Rs. 37 lakhs more than that for 1911-12.

The additions made during the year 1912-13 to the rolling stock of the Indian railways consisted of 200 engines, 584 coaching vehicles, and 5,678 goods vehicles, the number under supply at the end of the year being 464 engines, 1,644 coaching vehicles, and 16,122 goods vehicles. Good progress continues to be made in the provision of automatic brakes, communication gear between passengers and the train staff, bars and fastenings to windows and doors, electric lighting and fans, and gas lighting of carriages.

**Accidents.**—The more serious accidents that occurred on Indian railways during 1912-13 included two on the North-Western State railway, in the first of which two railway servants were killed, while in the second five persons were killed; one on the Oudh and Rohilkhund State railway, in which three Indian passengers were killed and five (one European and four Indians) injured; one on the South Indian railway, resulting in the death of four railway servants, and one on the Bengal and North-Western railway, in which three cattle attendants were killed.

**Damages by Floods and Rainfall.**—During July 1912 heavy floods caused breaches on the Bengal-Nagpur railway and rendered necessary transhipment of passengers from 18th July to 9th September. On the Dhasa-Kundla branch of the Bhavnagar railway, goods traffic had to be suspended for six days and passenger traffic from 22nd June to 1st October in consequence of damage by floods. There were also shorter interruptions of traffic on two sections of the Bengal and North-Western system and on parts of the Great Indian Peninsula and Junagad railways.

**Inchcape Conference.**—In January 1912 a conference under the presidency of Lord Inchcape was held in Calcutta between representatives of the Government of

(Railways.)

India and of most of the important Indian railway companies. Various complicated questions which had formed the subject of prolonged correspondence were thus settled by mutual agreement after discussion.

**Congestion of Traffic.**—The special difficulty with which railway administrations have had to grapple during the year has been the inability of railways to deal promptly with all the traffic offered to them, especially with the coal traffic. For the last six years a steady policy of improving open lines and increasing rolling-stock has been pursued, but at the same time there is no doubt that for the time being trade in India, as in most other countries during the present trade boom, has outstripped the transport capacity of the railways.

Every effort is being made to cope with the problem, and in the course of the year a conference was held partly in Calcutta and partly in the coal-fields, at which the difficulties of the coal traffic were discussed between the railway administrations and representatives of the coal trade. Further, Sir Henry Burt, now a member of the Railway Board, was put on special duty to investigate the congested jute traffic on the Eastern Bengal railway and advise generally in regard to the whole problem. Congestion was far less acute in the cold weather of 1912–13, though the traffic was even heavier than that of the corresponding period in the previous year, and there are good grounds for hope that, with a vigorous prosecution of the present railway policy, matters in this respect will rapidly improve.

**Use of Local Manufactures for Railway Purposes.**—Purchases of wagon frames and bodies built by local firms continued to be made during 1912–13 for the three State railways. The revised Store Rules of 1909 have not as yet resulted in any considerable increase in the purchase of stores of Indian manufacture by Government Departments. To encourage confidence in the local product, therefore, and to secure purchasing officers against inferior material, a set of revised standard specifications for important articles of local manufacture has been prepared. It has also been decided that the Government Laboratory near Kalimati on the Bengal-Nagpur railway, which was established primarily with the object of testing on the spot the steel rails supplied by the Tata Iron and Steel Works for State railways shall test other products from the same works for those railways and rails, other steel sections and pig-iron, &c. for other Government Departments as well as for companies' railways.

## Irrigation.

(*For further details see Statistical Abstract for British India, Tables*, 44–7, 68–9, 71, 74 *to* 76, 121, *and* 135.)

The class of works dealt with by the Public Works Department under the head of Irrigation may be roughly divided into canals and tanks, though these two kinds of works are frequently used in combination. The works under the former head take off, in most cases, from the larger rivers, which, drawing their water from lofty mountain ranges, can, even in times of drought, be depended upon for an unfailing supply. They have been utilised on the largest scale and with the most successful results in the United Provinces, the Punjab and Sind, and the deltas of the large rivers in the Madras Presidency. In tank irrigation, on the other hand, the supply of water is more or less dependent on the local rainfall, either directly or through the medium of the smaller rivers, which dry up in hot seasons. This is the common system of irrigation in Southern India, where irrigation is largely dependent on storage works. In the Madras Presidency alone there are some 60,000 tanks. These works are for the most part of native origin; but much has been done under the British Government in improving old tanks, and in constructing new works in Madras, the Bombay Deccan, Ajmere-Merwara, and the Central Provinces. In parts of Baluchistan, where the rainfall is scanty and very capricious, a method is practised of drawing the water from underground springs by means of tunnels driven into the hill sides. There remains the method of irrigation more extensively used in India than in any other country, viz., that by wells, which, however, does not come directly within the scope of operations of the Public Works Department.

Financially considered, the irrigation works are classed as "major" or "minor." The former class includes all the works which have been undertaken from loan funds, in the expectation that they would be sufficiently productive to cover the interest

charges on the sums spent on their construction. It also includes the works classed as famine protective, which are constructed not from borrowed funds, but out of the annual grant from revenue for famine relief and insurance. The amount available for the construction of protective works from the grant for famine relief and insurance is now supplemented by a further grant from revenue. This supplementary grant was first made in 1911–12. The cost of constructing the "minor" works, as well as the sums annually required for their working and maintenance, are met from ordinary revenues, and for the greater part of this class of works distinct capital and revenue accounts are not kept.

Speaking generally, the "major" class includes the works of the greatest engineering importance, which have been constructed, or, as in the cases of a few old Native works, almost entirely reconstructed by British officers.

The following statement gives a general view of results obtained from working the canals for which full accounts are kept for 1910–11, 1911–12, and 1912–13:—

| | Capital Outlay (Direct and Indirect) to end of Year. | Gross Receipts. | Working Expenses. | Net Receipts. | Percentage of Net Receipts on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| Major Works - - - | 39,157,678 | 4,192,094 | 1,289,157 | 2,903,237 | 7·41 | 14,738,955 |
| Minor Works - - - | 4,284,575 | 350,868 | 160,139 | 190,729 | 4·45 | 1,751,205 |
| Total for 1912–13 - - | 43,442,253 | 4,543,262 | 1,449,296 | 3,093,966 | 7·12 | 16,490,160 |
| Total for 1911–12 - - | 41,510,000 | 4,116,000 | 1,390,000 | 2,725,000 | 6·6 | 17,099,000 |
| Total for 1910–11 - - | 39,456,534 | 3,846,051 | 1,359,236 | 2,486,815 | 6·33 | 16,072,436 |

There are great differences in the financial success of the irrigation works in the various provinces. These are due to the various physical conditions of the country in regard to surface, soil, climate, and the absence or presence of large rivers with a permanent supply of water, as well as to the differences in the character and habits of the people in different districts. There are also considerable differences in the manner in which the irrigation revenue is assessed and collected, which have an important bearing on the financial success of the works. In Madras the bulk of the irrigation revenue is collected with, and on most of the works is consolidated with, the land revenue. In Bengal and Bombay the irrigation receipts consist largely of "occupiers'" rates, and are not supplemented by "owners'" rates, as in the United Provinces, nor, with a few exceptions, by a share of the land revenue. In Sind the revenue of the canals consists almost entirely of the share of the land revenue allotted to irrigation. Cultivation in Sind is dependent on the artificial supply of water, and the consolidated revenue from the irrigated lands is divided in the proportion of 90 per cent. to irrigation and 10 per cent. to land. In the United Provinces and in the Punjab, the direct water-rates are assessed partly on the occupier and partly on the owner of the land, the bulk of the rates falling on the former, and the irrigation receipts are further increased by a not unimportant contribution from the land revenue. The contribution from the land revenue is the amount considered due to irrigation when an enhancement of land revenue is levied at the periodical revision of the land settlement. Like the owners' rate, which is directly levied, it falls upon the owner of the land.

The immense systems of artificial water channels with which some parts of India are covered would appear at first sight to offer unrivalled opportunities for water carriage. But though efforts have been made to organise navigation services on some of the larger irrigation canals, it cannot be said that, on the whole, they have met with success. In many cases the traffic receipts have failed to cover the working expenses. It is, indeed, obvious that the canals, being designed primarily for irrigation purposes, must often be unsuitable from their alignment and level for navigation.

The following more detailed account of the irrigation operations of the year is given under the heads of the different provinces in which the works are situated. Each account opens with a statement showing the general results for 1912–13 of working all the irrigation and navigation systems *for which full accounts are kept* as compared with the results of the previous year.

**(Irrigation.)**

**Bengal:—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Expenditure. | Net Receipts. | Percentage on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| Major works - - - - | 740,562 | 18,237 | 16,457 | 1,980 | 0·26 | 80,958 |
| Minor works - - - - | 772,241 | 35,009 | 37,193 | — 2,184 | — | —* |
| Total for 1912–13 - - | 1,512,803 | 53,246 | 53,650 | — 204 | — | 80,958 |
| Total for 1911–12 - - | 1,506,508 | 55,813 | 41,256 | 14,557 | ·96 | 80,975 |

* The minor works open in Bengal are navigation works.

The only major irrigation work in operation in Bengal during 1912–13 was the Midnapur Canal. The other major works (except the Hijili Tidal Canal which is a navigation work) are in the new province of Bihar and Orissa.

**Bihar and Orissa:—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Expenditure. | Net Receipts. | Percentage on Capital Outlay. | Area irrigate |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| Major works - - - - | 4,069,256 | 155,077 | 91,267 | 63,810 | 1·57 | 968,856 |
| Minor works - - - - | 346,259 | 1,769 | 4,683 | — 2,914 | — | — |
| Total for 1912–13 - - | 4,415,515 | 156,846 | 95,950 | 60,896 | 1·57 | 968,856 |
| Total for 1911–12 - - | 4,366,404 | 153,367 | 84,572 | 68,795 | 1·58 | |

Amongst the major works of this province are included the Orissa and Sone canals which were formerly in Bengal; also the Tribeni Canal which, it is expected, will be completed by the end of the year 1913–14.

**Bombay including Sind:—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Working Expenses. | Net Receipts. | Percentage of Net Receipts on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| Major works - - - - | 4,213,248 | 256,562 | 123,610 | 132,952 | 3·15 | 1,324,243 |
| Minor works - - - - | 916,342 | 131,460 | 45,666 | 85,794 | 9·36 | 920,056 |
| Total for 1912–13 - - | 5,129,590 | 388,022 | 169,276 | 218,746 | 4·26 | 2,244,299 |
| Total for 1911–12 - - | 4,919,340 | 362,151 | 149,589 | 212,562 | 4·32 | 2,011,954 |

In the Bombay Presidency, excluding Sind, the water system does not, as a rule, admit of the construction of large irrigation works. The rivers or streams are mostly small and more or less dependent on the rainfall, and a constant supply cannot be obtained from them without the aid of large reservoirs or tanks. In Sind the success of the irrigation operations is dependent on the regular rise of the River Indus.

In Bombay proper, work was begun on the Nira Right Bank Canal, the biggest protective work hitherto undertaken in India, its cost being estimated at £1,718,000. This work is designed to bring effective relief to the "famine district" of Sholapur and should bring 190,000 additional acres under irrigation. Its construction is expected to take 11 years. Of the other works in progress, the Godaveri Canal is nearing completion and the Pravara Right Bank Canal was completed and brought into operation.

In Sind the existence of cultivation depends upon irrigation, and there is constant demand for water from the canals. This fact, and the comparatively inexpensive nature of inundation canals, account for the favourable results generally obtained from the working of irrigation canals in the province. In the year 1912–13 the

inundation, though much more favourable than that of the preceding year, was not altogether satisfactory.

During the year under review, the scheme for a barrage across the Indus at Sukkur, together with a canal on the left bank, which would have been the largest irrigating channel in India, and other connected works, was submitted for the sanction of the Secretary of State. This scheme was the product of investigations made at various times during the last 50 years with a view to converting the network of inundation canals in Sind into perennial canals.

It may be added that the scheme was referred to a special Committee in this country and that, as a result of their deliberations, the Secretary of State has withheld his sanction.

**Burma :—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Working Expenses. | Net Receipts. | Percentage of Net Receipts on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| Major Works | 1,474,036 | 80,295 | 33,161 | 47,124 | 3·87 | 257,749 |
| Minor Works | 262,440 | 95,533 | 23,296 | 72,237 | 27·52 | 480,923 |
| Total for 1912–13 | 1,736,476 | 175,818 | 56,457 | 119,361 | 6·87 | 738,672 |
| Total for 1911–12 | 1,550,438 | 163,488 | 45,525 | 118,963 | 7·67 | 677,477 |

In Lower Burma there are no large irrigation works. The expenditure recorded under the head of "Irrigation and Navigation" has reference to the river embankment and drainage works and navigation canals.

In Upper Burma all three works in operation (*i.e.*, the Mandalay, Shwebo, and Mon canals) irrigated a larger area than in 1911–12. In the cases of the Mandalay and Mon canals the area irrigated exceeded the maximum irrigable area shown in the estimates for those works. Work on the construction of the Ye-u canal was somewhat retarded in the earlier part of the year by scarcity of labour. The construction of the Twante canal was continued.

**Central Provinces and Berar :—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Working Expenses. | Net Receipts. | Percentage of Net Receipts on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| All Works (1912–13) | 834,051 | 6,530 | 5,611 | 919 | 0·11 | 31,815 |
| Total for 1911–12 | 650,234 | 4,146 | 2,425 | 1,721 | 0·27 | 22,080 |

Irrigation from works constructed by the State is still a novelty to the people of the Central Provinces and Berar, and it is therefore necessary to offer its benefits on the most liberal terms. Partial failure of the rains in September and October caused a considerable demand for irrigation for kharif in those months, and the total area irrigated in the Province during 1912–13 exceeded the highest figure previously recorded by over 30 per cent. Progress on the Tendula canal headworks and on the Wainganga canal was somewhat hampered by labour difficulties, but a good start has been made on the construction of the headworks of the Mahanadi canal. The Mahanadi canal is estimated to cost about £662,000 and to irrigate 360,000 acres, yielding a net revenue of over 8 per cent. per annum, whereas the Wainganga canal is expected to cost about £254,000, to irrigate some 79,000 acres, and to yield a net revenue of about 5·3 per cent. each year.

(Irrigation.)

**Madras:—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Working Expenses. | Net Receipts. | Percentage of Net Receipts on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | Acres. |
| Major works - - - - | 5,986,217 | 770,004 | 183,051 | 586,953 | 9·81 | 2,201,872 |
| Minor works - - - - | 1,281,251 | 53,645 | 23,884 | 29,761 | 2·32 | 140,802 |
| Total for 1912–13 - - | 7,267,468 | 823,649 | 206,935 | 616,714 | 8·49 | 2,342,674 |
| Total for 1911–12 - - | 7,215,343 | 804,265 | 216,619 | 587,646 | 8·14 | 3,936,798 |

From an irrigation point of view the Madras Presidency is distinguished by the variety and extent of its works, ranging from the great deltaic systems of the Godaveri, Kistna, and Cauvery to the small tanks and channels maintained by the Revenue Department. The number of tanks directly or indirectly dependent on the local rainfall is very large, and, speaking generally, the success of the irrigation operations is more affected by local climatic conditions than in Northern India, where the irrigation works draw their supply from large rivers fed by the melting of the snow on distant mountain ranges.

For a great number of these smaller works no accounts are kept, and consequently the figures given in the above table afford a very incomplete picture of the work done. The actual expenditure on all irrigation works during the year amounted to over £461,000, and the receipts to £1,817,700. The total area irrigated was 7,320,800 acres. The season was favourable and the irrigation supplies were good.

Two schemes of vast magnitude were under the consideration of the Government of India at the end of the year, the investigation of them by the provincial engineers having been completed in 1911–12. The Kistna reservoir project is estimated to cost about £5½ millions and to bring over 700,000 additional acres under irrigation. An eventual return of nearly 6 per cent. on the capital outlay is expected. The Cauvery reservoir project provides for new irrigation of about 400,000 acres. The estimated cost is over £2½ millions, on which a return of nearly 7 per cent. is anticipated.

**North West Frontier Province:—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Working Expenses. | Net Receipts. | Percentage of Net Receipts on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| Major works (1912–13) - - | 1,197,068 | 58,791 | 22,120 | 36,670 | 3·12 | 245,530 |
| Major works (1911–12) - - | 989,539 | 52,250 | 22,677 | 29,573 | 2·99 | 225,160 |

A large proportion of the canals in this province are privately owned. There were three Government major works in operation at the end of 1912–13, and the results during the year were very satisfactory. Work on the construction of the Upper Swat River canal, which was begun in 1905–6, was well advanced. This canal is estimated to cost £1,184,300, and to irrigate over 150,000 acres in Kharif and 229,000 acres in rabi season. About 40,500 acres of the gross area commanded are in the tribal territory across the frontier.

**Punjab:—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Working Expenses. | Net Receipts. | Percentage of Net Receipts on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| Major works - - - - | 12,954,061 | 2,186,222 | 578,795 | 1,607,427 | 12·41 | 6,961,865 |
| Minor works - - - - | 39,468 | 6,262 | 6,792 | — 530 | — | 82,306 |
| Total for 1912–13 - - | 12,993,529 | 2,192,484 | 585,587 | 1,606,897 | 12·37 | 7,044,171 |
| Total for 1911–12 - - | 12,122,561 | 1,812,899 | 563,616 | 1,249,283 | 10·31 | 6,870,126 |

As the above figures show, the year was a very favourable one; the figures of areas irrigated and of revenue for the year exceeded all previous records. Very good progress was made with the Triple canal project. The Upper Chenab canal, which was opened early in the year, yielded most satisfactory results, the area irrigated being 116,000 acres against 40,000 anticipated in the project forecast. The Lower Bari Doab canal was opened just after the close of the year, a year earlier than was originally anticipated. It is hoped that the Upper Jhelum canal, which will complete the project, will be ready for opening in October 1914. Further surveys were made in connection with the Sutlej Valley project, a vast scheme for improving the supply of the existing inundation canals dependent on the Sutlej and for extending the benefits of irrigation to the desert regions south of the river. The cost is estimated at £6,000,000, and the irrigable area at three million acres.

**United Provinces of Agra and Oudh:—**

| — | Capital Outlay to end of Year. | Gross Receipts. | Working Expenses. | Net Receipts. | Percentage of Net Receipts on Capital Outlay. | Area irrigated. |
|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | | Acres. |
| Major works - - - - | 7,691,692 | 660,687 | 235,150 | 425,537 | 5·53 | 2,576,067 |
| Minor works - - - - | 228,053 | 15,357 | 9,355 | 6,002 | 2·63 | 120,702 |
| Total for 1912–13 - - | 7,919,145 | 676,044 | 244,505 | 431,539 | 5·45 | 2,696,769 |
| Total for 1911–12 - - | 7,766,499 | 698,110 | 257,909 | 440,201 | 5·66 | 2,442,957 |

Demand for irrigation on all the canals was very keen, and on neither the Upper Ganges nor the Lower Ganges canal (the two largest works in the province) was the supply fully equal to the demand.

During the year work was commenced on the Ghaggar protective canal, which will serve a very dry tract in the Mirzapur district, irrigating some 66,000 acres, at an estimated capital cost of £234,000; and on new permanent headworks for the Ganges canal, the estimate for which is £172,000.

## Buildings and Roads (Civil).

The Buildings and Roads branch of the Public Works Department embraces all the operations of the Department which are not classed under the special heads of Railways and Irrigation. It includes the extension and maintenance of the road system, the construction and repair of all the buildings required for the proper discharge of the functions of government in all its branches, and a large miscellaneous class of works of public improvement, including lighthouses, harbours, embankments, boat bridges, and ferries, and the water supply and sanitation of towns.

The operations of this branch of the Department are classed primarily under the head of Civil Works, the expenditure on which is chiefly met from provincial resources. The classification of this expenditure for 1912–13 under the various heads is shown in the following table:—

| — | Central Provinces and Berar. | Burma. | Assam. | Bengal. | Bihar and Orissa. | United Provinces of Agra and Oudh. | Punjab. | North-West Frontier Province. | Madras. | Bombay. | India General. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| Imperial - | 62,786 | 23,329 | 4,046 | 111,096 | 9,590 | 58,448 | 26,702 | 169,236 | 44,913 | 28,698 | 449,982 | 988,826 |
| Provincial* | 451,112 | 550,474 | 287,748 | 600,143 | 398,796 | 492,293 | 458,369 | — | 1,044,260 | 652,343 | — | 4,935,538 |
| Total - | 513,898 | 573,803 | 291,794 | 711,239 | 408,386 | 550,741 | 485,071 | 169,236 | 1,089,173 | 681,041 | 449,982 | 5,924,364 |

* Includes expenditure by the Civil Department in addition to that by the Public Works Department.

| | |
|---|---|
| Expenditure by Civil Officers from Imperial Funds £ | 44,474 |
| Expenditure in England - - - - £ | 90,665 |
| Grand Total - - - £ | 6,059,503 |

The extension of local Government in India has thrown a large portion of the smaller class of public works into the hands of the local Boards. Speaking generally, the boards maintain their own establishments, but in the case of any works of unusual difficulty they have recourse to the professional skill of the Public Works officers.

**(Buildings and Roads (Civil).)**

The following short account of Civil Works for the year under review is given under the heads of the different provinces in which the expenditure was incurred:—

**Bengal.**—During the year the construction of Government buildings at Dacca, where the headquarters of the late Government of Eastern Bengal and Assam were established, neared completion. The programme of works was somewhat modified by the territorial changes announced at the Coronation Durbar, but the new buildings will be occupied by the Government of Bengal during its stay at Dacca for a portion of each year.

**Bihar and Orissa.**—Preliminary investigations were made and estimates amounting to £623,407 were submitted for the establishment of a permanent capital for the Local Government at Bankipore, near Patna. Pending the construction of the capital the seat of the Local Government has been temporarily located at Ranchi, and estimates amounting to nearly £100,000 were put forward for temporary works at Ranchi and Bankipore.

**Bombay.**—Under Provincial works, amounts of £56,000 were spent on educational colleges and schools, £55,000 on police buildings, £38,700 on land revenue buildings and £37,000 on medical buildings.

A total sum of £125,100 was spent on communications.

**Burma.**—A special grant of £133,000 was made by the Government of India for the improvement of communications, the condition of which is still unsatisfactory in this province. A comprehensive scheme for development and improving of communications is now under the consideration of the Government of India. The new Government Press buildings in Rangoon were completed during the year and several schools and hostels were put up.

**Central Provinces and Berar.**—The total expenditure on provincial works was £436,000, of which about £216,000 was on original works. The expenditure on communications amounted to £175,000, of which about £70,000 was for original works. Large sums are being spent in this province on causeways and bridges with the object of keeping all important lines of communication open throughout the year.

**Madras.**—The new Collector's office at Vizagapatam was almost completed. Some of the works connected with the Agricultural College and Research Institute at Coimbatore were completed and others were in progress. Good progress was made on the Forest College at Coimbatore and the new law courts at Guntur. The re-organisation of the Madras police force necessitated the erection of many police buildings.

Under the head of Communications good progress was made on the Indravati Bridge and work was commenced on the new bridge across the Bhavani at Mettupalaiyam.

**North-West Frontier Province.**—The works completed or in progress during the year included additions and alterations to Government House, Peshawar, new barracks at Landi Kotal in the Khyber district and Government Experimental Farm buildings at Tarnab.

**Punjab.**—The total expenditure on public works amounted to about £531,000 of which sum nearly £400,000 was spent on provincial civil works, including £38,300 on police buildings and jails, £33,300 on educational buildings and £30,000 on medical buildings.

The outlay on communications was about £112,000, of which £36,700 was on works and the remainder on repairs.

**United Provinces.**—The expenditure during the year increased from about £673,000 in the previous year to £720,000. Imperial works in progress include the Forest Research Institute at Dehra Dun and new post offices for Allahabad and Agra; the post offices at Cawnpore and Benares were completed. A beginning was made with the King Edward Memorial Sanatorium at Bhowali. The Senate hall at Allahabad University was finished and formally opened. Eighty miles of new metalled road were constructed during the year and 71 miles of new avenues were planted.

# CHAPTER XII.

## POST OFFICE AND TELEGRAPHS.

*(For further details, see Statistical Abstract for British India, Tables 45 to 47, 90 to 96, and 98 to 100.)*

## Post Office.

**Financial Results.**—The receipts and charges of the Post Office for the last three years, as shown in the Finance and Revenue Accounts, have been as follows:—

| Year. | Receipts. | Expenditure. | Net Revenue (+) or Deficit (−). |
|---|---|---|---|
| | £ | £ | £ |
| 1910–11 | 1,996,922 | 1,950,892 | +46,030 |
| 1911–12 | 2,134,279 | 2,008,470 | +125,809 |
| 1912–13 | 2,262,436 | 2,026,567 | +235,869 |

**Extent of Postal Operations.**—The extent of the operations of the Post Office and their development during the last three years, are shown in the following tables:—

| Year. | Post Offices. | Letter Boxes. | Village Postmen. | Length of Postal Lines.* |
|---|---|---|---|---|
| | No. | No. | No. | Miles. |
| 1910–11 | 18,813 | 46,884 | 8,380 | 155,652 |
| 1911–12 | 18,801 | 48,122 | 8,219 | 153,950† |
| 1912–13 | 18,789 | 48,524 | 8,190 | 154,493 |
| Increase or decrease in 1912–13 as compared with 1911–12 | −12† | +402 | −29 | +543 |

* Including the Bombay-Aden line.

† These decreases are due to the discontinuance of mail services in certain districts, opened in response to applications, but of which no advantage had been taken.

The general correspondence returns, of which a summary is given below, show an increase exceeding 49 millions of articles (excluding money orders) for 1912–13 as compared with the figures for 1911–12. Of the additional articles letters accounted for nearly 30 millions and postcards for just over 11 millions.

| Year. | Letters and Postcards. | Newspapers. | Parcels. | Other Postal Articles. | Total. |
|---|---|---|---|---|---|
| | No. | No. | No. | No. | No. |
| 1910–11 | 833,989,178 | 49,252,161 | 11,205,844 | 50,700,429 | 945,147,612 |
| 1911–12 | 850,889,587 | 52,612,161 | 10,598,068 | 51,292,914 | 965,392,730 |
| 1912–13 | 891,950,285 | 54,956,826 | 11,593,563 | 56,287,771 | 1,014,788,445 |
| Increase or decrease in 1912–13 over 1911–12. | +41,060,698 | +2,344,665 | +995,495 | +4,994,857 | +49,395,715 |

**Alterations in Postal Arrangements during 1912–13.**—During the year there were no changes in the inland postal arrangements which directly affected the public. As regards foreign post, the Imperial penny postage scheme was extended to the New Hebrides; the value-payable system was made applicable to postal articles exchanged with the Straits Settlements; and fees for telegraphic money orders issued in India for payment in Ceylon were reduced, arrangements at the same time being made to enable the remitter to include a private communication to the payee in the official telegram advising the remittance.

**Amount of Postal Matter dealt with.**—The total number of Articles received for delivery, including money orders, was over 1,044 millions, of which, it is estimated 99·75 per cent. were actually delivered or paid, as compared with 99·74 per cent. in the preceding year.

In 1912–13 the receipts of postal articles (excluding money orders) at the dead-letter offices were 9,294,168; of this number, 7,012,674 articles were either delivered

**(Post Office.)**

to addresses or returned to senders, and 2,281,494 could not for various reasons, such as the absence of an address, be similarly treated. This last figure, as indicated above, is only ·25 per cent. of the total number of articles received for delivery.

It is not possible this year to give the usual comparative figures of the total amount of postal matter exchanged between India and the United Kingdom, there being no accurate figures for the British portion of the correspondence. The comparative figures of the correspondence despatched from India are as follows :—

| | 1911–12. | 1912–13. | Increase or Decrease. |
|---|---|---|---|
| Letters and Postcards | 12,333,000 | 12,500,000 | +167,000 |
| Newspapers, Book Packets, and Samples | 2,333,000 | 2,000,000 | —333,000 |

The decrease under the second head is attributed to a large falling off in the number of cotton samples sent from India to Manchester and Liverpool.

The figures of correspondence with other countries for 1911–12 and 1912–13 are as follows :—

| | 1911–12. | 1912–13. | Increase or Decrease. |
|---|---|---|---|
| Letters and Postcards | 14,500,000 | 13,833,000 | —667,000 |
| Newspapers, Book Packets, and Samples | 9,333,000 | 10,083,000 | +750,000 |

The decrease under the first head is possibly due to the fact that the figures for 1912–13 have been based on a new set of statistics recorded in October 1912.

**Insurance, Value Payable Post, Money Orders, Savings Bank, &c.**—Information regarding these branches of the work of the Post Office can be most conveniently given in a tabular form :—

| | 1911–12. | 1912–13. | Increase or Decrease. |
|---|---|---|---|
| **Insurance of Letters and Parcels :—** | | | |
| Number of articles insured | 1,856,902 | 2,706,436 | +849,534 |
| Number of claims admitted | 72 | 111 | +39 |
| Net payment in respect of claims | £417 | £801 | +£384 |
| Receipts from Insurance Fees | £41,101 | £57,961 | +£16,860 |
| **Value Payable Post :—** | | | |
| Number of articles sent | 7,984,292 | 8,815,915 | +831,623 |
| Value specified for recovery | £6,333,300 | £7,333,300 | +£1,000,000 |
| **Money Orders :—** | | | |
| Value of Ordinary Inland Orders issued in India | £26,981,133 | £28,750,753 | +£1,769,620 |
| „ Telegraphic Money Orders | £2,547,114 | £2,845,147 | +£298,033 |
| Average value of an Inland Money Order | Rs. 16 a. 13 p. 2 | Rs. 16 a. 8 p. 10 | — a. 4 p. 4 |
| „ „ a Telegraphic Money Order | Rs. 80 a. 3 p. 8 | Rs. 78 a. 12 p. 2 | —Rs. 1 a. 7 p. 6 |
| Value of Foreign Orders issued in India | £698,572 | £703,271 | +£4,699 |
| „ „ „ paid „ | £2,249,113 | £2,555,157 | +£306,044 |
| **Savings Bank :—** | | | |
| Number of Post Offices transacting Savings Bank business at end of year. | 9,502 | 9,460 | —42 |
| Number of accounts in Post Office Savings Banks | 1,500,834 | 1,566,860 | +66,026 |
| Amount of Deposits at beginning of year | £11,279,215 | £12,599,030 | +£1,319,815 |
| „ New Deposits during year | £6,756,860 | £7,498,071 | +£741,211 |
| „ Interest credited „ | £339,183 | £374,698 | +£35,515 |
| „ Withdrawals „ | £5,776,228 | £6,730,832 | +£954,604 |
| Amount of Deposits at end of year | £12,599,030 | £13,740,967 | +£1,141,937 |
| Securities held on behalf of Depositors at end of year | £517,153 | £595,980 | +£78,827 |
| **Life Insurance and Annuities :—** | | | |
| Number of policies in existence at end of year | 22,076 | 23,288 | +1,212 |
| Sum insured | £2,022,565 | £2,141,769 | +£119,204 |

(Post Office.)

**Offences.**—During the year under review there were 19 cases in which the mails were plundered by highway robbers, of which 12 were in British territory and 7 in Native States. The figures for the preceding year were 23 and 5 respectively.

The number of cases in which the servants of the Post Office were found guilty of offences punishable by the law was 472. The defalcations and losses amounted to £2,738, as compared with £3,872 in 1911–12. A sum of £1,771 was recovered from the offenders or their sureties; £153 was charged against the Post Office Guarantee Fund, and the remainder was written off as irrecoverable or remained unadjusted at the close of the year.

**Staff.**—The total staff of the department numbered 92,870 on 31st March 1913, as compared with 92,755 on the corresponding date in 1912.

**Sale of Quinine.**—To facilitate the supply of the drug, especially in cases of malaria, quinine is sold at Post Offices throughout India. In 1912–13 10,694 lbs. were given to the Post Office for distribution, as compared with 9,562 lbs. in the preceding year.

## Telegraphs.

The following statement refers to the whole of the telegraph system under the direct control of the Government of India, but excludes the Indo-European Department, extending from Karachi to Teheran and Fao, for which, as usual, a separate account is given. The system now consists of 78,862 miles of line, 311,034 miles of wire and cable.

The most interesting feature of the period under review was the experimental amalgamation in the Bombay and central circles of the telegraph with the postal services from 1st July 1912, and the consequent separation of the engineering from the traffic work in both departments. The experiment was carefully watched for the four months July–October, and seems to have commended itself to the general public, whose criticism was specially invited, as well as to the authorities. In view of its success the Director-General of Posts and Telegraphs decided to proceed with the preparation of the scheme for the permanent amalgamation of the two services all over India, and a complete scheme was submitted to the Government of India in November 1912 and has since been sanctioned.

Other events of interest during 1912–13 were the reduction from 9 annas to 4 annas (4*d.*) a word of the rate for press telegrams between India and the United Kingdom; the reduction of the telegraph rate between India and Ceylon from 3 annas a word to 1 rupee for the first 12 words, and 2 annas for each additional word; the decision to make no further appointment to the unattached list of the Telegraph Department, which at present consists of 20 warrant and non-commissioned officers, and to appoint instead six time-expired military telegraphists to the civil establishment; and the successful development of a co-operative credit society among the staff of the central telegraph office at Calcutta. There has also been considerable development in the use by ships of wireless telegraphy, and four large Marconi stations were erected at Karachi, Nagpur, Lahore, and Bombay.

The following statement shows, for a period of five years, the progress that has been made in extending public telegraphic communication:—

| Year. | Capital Expenditure. | Miles of Line | Miles of Wire. | Miles of Cable. | Offices open to the Public. | | |
|---|---|---|---|---|---|---|---|
| | | | | | Departmental, Ordinary and Postal combined. | Railway and Canal. | Total. |
| | £ | | | | | | |
| Up to beginning of 1908–09 - | 6,857,048 | 68,568 | 269,389 | 371 | 2,544 | 4,240 | 6,784 |
| During 1908–9 - - - | 239,671 | 1,140 | 8,342 | — 14 | 114 | 75 | 189 |
| „ 1909–10 - - - | 167,955 | 2,712 | 5,643 | — 30 | 104 | 148 | 252 |
| „ 1910–11 - - - | 147,555 | 1,993 | 4,566 | 89 | 94 | — 54 | 40 |
| „ 1911–12 - - - | 226,972 | 1,740 | 7,197 | 8 | 99 | 217 | 316 |
| „ 1912–13 - - - | 225,707 | 2,277 | 7,795 | 8 | 160 | 113 | 273 |
| To end of 1912–13 - - | 7,864,908 | 78,430 | 302,932 | 432 | 3,115 | 4,739 | 7,854 |

* Excludes £6,861 cost of cable lines transferred to Military Works Department on the 1st April 1899.

**(Telegraphs.)**

A general view of the operations of the Department in 1912–13, in comparison with those of the four previous years, will be gained from the following statement:—

| Year. | Number of Paid Telegrams during Year. | Gross Receipts, including State but excluding *pro formâ* Revenue. | Charges. | Net Receipts. | Return on Capital. |
|---|---|---|---|---|---|
| | | £ | £ | £ | |
| 1908–09 | 13,006,778 | 874,795 | 783,022 | 91,773 | 1·29 |
| 1909–10 | 12,084,697 | 795,828 | 807,519 | — 11,691 | — |
| 1910–11 | 13,090,228 | 840,517 | 791 833 | 48,684 | ·66 |
| 1911–12 | 14,671,819 | 934,813 | 821,624 | 113,189 | 1·48 |
| 1912–13 | 15,449,071 | 1,001,972 | 854,776 | 147,196 | 1·89 |

The whole of the annual expenses connected with the telegraphs in India, whether incurred on capital account for the construction of new lines or on revenue account for the maintenance and working of the system, are defrayed from the revenues of the Government of India. In 1912–13 the receipts of the Department were sufficient to defray the working expenses, and about 65 per cent. of the capital expenditure incurred during the year, leaving a charge on Government revenues of £78,511.

The number of messages sent in 1912–13, and, as a result of this, the amount of gross receipts, both show record figures. The financial results cannot be regarded as entirely satisfactory until the return of net revenue on total capital outlay reaches about 3·5 per cent., *i.e.*, the average rate of interest to be charged on capital expenditure, but of recent years the Department has had to meet heavy expenditure, *e.g.*, on wireless telegraph stations, for which there is at present very small return.

| Class of Telegram. | 1911–12. | | 1912–13. | |
|---|---|---|---|---|
| | No. | Value. | No. | Value. |
| | | £ | | £ |
| Inland State | 1,207,810 | 74,042 | 1,130,721 | 65,746 |
| Foreign State | 19,541 | 4,263 | 13,144 | 5,117 |
| Total State | 1,227,351 | 78,305 | 1,143,865 | 70,863 |
| Inland Private | 11,928,575 | 439,915 | 12,712,201 | 474,701 |
| Foreign Private | 1,515,893 | 173,711 | 1,593,005 | 171,228 |
| Total Private | 13,444,468 | 613,626 | 14,305,206 | 645,929 |
| Total State and Private | 14,671,819 | 691,931 | 15,449,071 | 716,792 |

At the close of 1912 the number of telephone exchanges established by the Telegraph Department was 183 and by telephone companies 13. Royalties paid to the Department by the companies in 1912 amounted to £4,836.

The interruptions in 1912–13 were in no cases of a very serious character.

As regards radio-telegraphy, there are now 15 wireless stations in India, five of which are situated inland. The latter have helped to a small extent in the disposal of ordinary traffic. There are also round the Indian coast six wireless stations which keep open permanently to receive distress and other signals from ships. The stations worked well throughout the year except during April, May and June, when atmospheric disturbances were exceptionally troublesome.

## Indo-European Telegraph Department.

The system of telegraph lines and cables connecting the terminus of the Indo-European Company's telegraphs at Teheran and of the Turkish Telegraph lines at Fao with the Indian telegraph system at Karachi is controlled by the Indo-European Government Telegraph Department, and consists of 1,948 knots of cable, 2,727 miles of line, and 6,996 miles of wire. This also includes a cable from Jask to Muscat, 219 knots in length.

**(Indo-European Telegraph Department.)**

The Department also maintains a line from Teheran to Meshed, 568 miles, which is the property of the Persian Government.

The financial results of working the Department, as compared with the four preceding years, were as follows:—

| Year. | Capital Outlay to end of Year. | Gross Receipts.* | Expenditure. | Net Receipts. | Percentage of | |
|---|---|---|---|---|---|---|
| | | | | | Net Receipts to Capital. | Expenditure to Gross Receipts. |
| | £ | £ | £ | £ | | |
| 1908–9 | 998,142 | 103,689 | 75,287 | 28,402 | 2·84 | 72·60 |
| 1909–10 | 1,000,263 | 111,489 | 72,084 | 39,405 | 3·93 | 64·65 |
| 1910–11 | 999,966 | 121,687 | 74,749 | 46,938 | 4·69 | 61·43 |
| 1911–12 | 1,002,539 | 131,822 | 72,710 | 59,112 | 5·90 | 55·16 |
| 1912–13 | 984,855 | 134,130 | 96,455 | 37,675 | 3·82 | 71·91 |

* This represents the revenue of the Department after adjustments made in accordance with the provisions of the Joint Purse arrangement.

The decrease of £17,684 in capital expenditure and increase of £23,745 in revenue expenditure as compared with the figures for 1911–12 are mainly due to an adjustment between capital and revenue made in accordance with Article IV. of the Anglo-Persian Convention of 1901, which provided that three-quarters of the rental of the Central Persia line was to be retained by the Indo-European Telegraph Department as repayment by the Persian Government of the capital expended on the construction of the line. The amount of rental thus kept back since July 1907, the date from which rental accrued to the Persian Government, has hitherto been treated as a reduction of the general revenue expenditure of the Department. In the year under review, however, it was decided to credit the amount so retained since 1907 to capital and to treat similarly any amounts so retained in the future.

The number of messages transmitted during the year amounted to 397,179, as compared with 350,988 in 1911–12. All except about 4,000 of these were commercial and private telegrams.

Under the Joint Purse Agreement, the share of the Department was £137,802, as against £135,818 in 1911–12. The amount paid into the Joint Purse for the year under review was £82,888.

The Departmental receipts from the Australasian Message Fund for 1912–13 amounted to £7,095, being £410 more than in 1911–12, and an increase of £860 on the receipts for 1889, on which the original Australasian Message Fund was based.

There were no total interruptions stopping traffic between Karachi and Bushire in 1912–13. The Bushire-Teheran section was totally interrupted seven times, the interruptions extending altogether over 12½ days, but on each occasion work was carried on by the Central Persia line. On the Turkish route interruptions between Fao and Constantinople occurred to the total extent of 33¾ days, the lowest figure recorded in the last five years, though the working of this route continues to be unsatisfactory.

Acts of wilful damage to the lines were considerably more numerous than in 1911–12, and the general condition of the country districts during the year was again most unsafe. The inspection and repair of the lines were carried out under conditions of much difficulty and danger. Since the end of the year conditions have slightly improved.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

# CHAPTER XIII.

## SCIENTIFIC DEPARTMENTS.

GENERAL.
BOARD OF SCIENTIFIC ADVICE.
SURVEY OF INDIA.
OTHER SURVEYS.
METEOROLOGICAL DEPARTMENT.
AGRICULTURAL DEPARTMENTS.
CIVIL VETERINARY DEPARTMENT.
ARCHÆOLOGICAL DEPARTMENT.
MEDICAL RESEARCH INSTITUTES.

### General.

Owing to the progress made in recent years in the application of science to various branches of the work of Government, a special chapter is now necessary for dealing not only with surveys, but also with other scientific departments that have been established by the Imperial or Provincial Governments for the conservation and development of the natural resources of the country. In 1912–13 expenditure on Scientific Departments amounted to about £806,000, against which must be set about £80,000 for receipts. The great bulk of the expenditure was for agricultural and veterinary work and for survey work.

### The Board of Scientific Advice.

This Board includes the heads of the Meteorological, Geological, Botanical, Forest, and Survey Departments, representatives of the Agricultural and Civil Veterinary Departments, and other scientific authorities whose special attainments may be useful. It was established in 1902 to co-ordinate official scientific inquiry, to ensure that research work is distributed to the best advantage, and to advise the Government of India in prosecuting practical research into those questions of economic or applied science on the solution of which the agricultural and industrial development of the country so largely depends. The programmes of investigation of the various departments are annually submitted to the Board for discussion and arrangement, and an annual report is published on the work done, as well as a general programme of research for the ensuing year. The reports and the programmes formulated are communicated for consideration to an Advisory Committee of the Royal Society, who from time to time furnish valuable suggestions and advice. The Board held its 25th meeting in November 1913.

### Survey of India.

The work of the Survey of India Department falls under various heads, namely, the trigonometrical survey, topographical and forest surveys, special surveys and explorations, and map production. Cadastral surveys are now carried out by the Provincial Land Records and Settlement Departments. The latest available information on most of these matters relates to the year ended 30th September 1912. The total cost of the Department for that year was about £217,000.

In 1904 attention was drawn to the defective state of the topographical survey maps, and a Committee was appointed to report on the subject. To overtake the arrears of revisional survey and to secure that the map of India should be brought up to date and revised at proper intervals, they recommended a considerable increase of establishment and an increased expenditure of £210,000 a year for the next 25 years. They also made recommendations for altering the size and improving the quality of the maps. After further inquiry the Government of India decided that a scale of 1 inch to the mile would ordinarily be sufficient, reserved forests and special areas being surveyed on the scale of 2 inches to the mile, and the ½-inch scale employed for waste and barren tracts. Of the total of 1,821,600 sq. miles included in the programme, 261,088 sq. miles were completed by September 1912.

During the year ending September 1912 field operations were carried on by 18 survey parties. Twelve of these were employed on topographical, cantonment, and forest surveys.

(Survey of India.)

The triangulation party commenced principal triangulation of the Sambalpur series and completed 415 miles of secondary triangulation. Tidal operations were carried on at nine stations. Two parties were employed on geodetic work (astronomical latitudes and pendulum observations), one on levelling, and one on magnetic survey.

The total area surveyed topographically was 45,249 square miles. This included a special revision survey of Delhi and district in view of the transfer of the capital. Forest surveys were carried out in eight provinces.

One hundred and fifty-nine sheets of the 1-inch map were published, making a total published of 656 out of an entire programme of 6,328. The total number of maps issued was 288,633.

## Other Surveys.

*Geological.*—The first object of the Geological Survey Department is the preparation of a general geological map of India, and this work was continued during 1912 by surveys in Bombay, Burma, Rajputana, Central India, Kashmir, the Central Provinces and the Punjab. Various economic investigations, which form an increasingly important part of the Department's work, were conducted. These included the revision of the map of the Raniganj coal-field, and inquiries into occurrences of coal in the Central Provinces, gold in Burma, iron in Goa, Ratnagiri and Jaipur, potash salts in the Punjab, wolfram in Tavoy, &c.

*Botanical.*—The botanical survey is under the direction of the Superintendent of the Royal Botanic Gardens, Calcutta. The Economic Botanist to the Botanical Survey has replaced the Reporter on Economic Products, whose post was abolished in 1912. The economic botanists of the Provincial Government are associated with this Department. Much botanical work is done by forest officers and others outside the Department.

Zoological survey work is carried on by the Indian Museum, and marine survey work is under the Royal Indian Marine, who possess two specially-equipped vessels for the purpose.

## Meteorological Department.

The work of the Meteorological Department falls into two parts, the directly useful, and the purely scientific, aiming at the ascertainment of facts that shall be of practical utility in future. The scientific work includes the experimental and theoretical examination of the physical processes, on the earth or in the sun, which determine the weather. The practical work consists chiefly in the collection and distribution of current weather information. The area under observation by the Department embraces not only India but the whole of the Arabian Sea and Indian Ocean, the Persian Gulf, Persia, Arabia, Chinese Turkestan, and Tibet. There were 283 observation stations (of which 48 were non-departmental) at the close of 1912–13, ranging from the well-equipped observatories at Kodaikanal, Madras, Bombay, Alipore (Calcutta), Allahabad, and Lahore, to small stations at which observations of temperature, rainfall, and snowfall only are recorded. The Department inspects their working and collects the results; it also studies the meteorology of the Indian Ocean by means of the logs of vessels arriving at Indian and other ports, and conducts seismographic observations. A series of investigations of the upper air, calculated to extend over a period of 10 years, has been started. Balloons fitted with recording apparatus will be employed. Special investigations comprised wind observations, solar and terrestrial radiation observation, sunshine observations, seismological observations, barometric observations, and observations of temperature. The actual rainfall of the last ten years compared with the normal will be found in the annual *Statistical Abstract of British India* (Table 118). Daily, weekly, and monthly weather reports, as well as seasonal forecasts and storm warnings, are issued. Warnings of approaching storms are sent to ports on the Bay of Bengal from Calcutta, and to ports on the Arabian Sea coast from Simla, and meteorological information is now supplied from wireless coast stations to ships that ask for it. Arrangements have been made that vessels on certain routes shall similarly supply reports to the Department. The system of flood warnings to canal, civil, and railway officers, to military officers, and to private firms continued to be useful, and 2,281 such warnings were issued during 1912–13.

## Agricultural Departments.

**General.**—The greater part of the scheme for the development of agricultural experiment and instruction formulated in 1905 has now been realised. It is based on the generally accepted principle that effective improvement in Indian agriculture depends largely, or mainly, on the application of European science to Indian conditions. Although India is a land of skilled agriculturists, the outturn per acre of many crops is comparatively small, and the quality of some kinds of produce is inferior. Much can be done to improve and develop Indian agriculture by energetic research and by the application of more scientific methods and greater scientific knowledge than were formerly available. The necessary scientific knowledge must inevitably be obtained in the first instance by the recruitment of trained specialists from the United Kingdom; but it is an essential part of the scheme that facilities for the best agricultural training shall be made available in India, in order that the country may become self-supporting, so far as possible, in the scientific development of agricultural methods on lines suited to local conditions.

There are Agricultural Departments in every larger Province under a Director of Agriculture with one or more Deputy Directors—the latter being trained agriculturists. Besides these there are various specialists attached to the provincial departments and in some cases the Principalship of the Provincial Agricultural College is a separate post. In Bengal there is a Fibre Specialist. The officers directly under the Government of India include the Director of the Pusa Institute, who is also Principal of the Agricultural College and Agricultural Adviser to the Government of India, and nine specialists (three entomologists, two mycologists, two agricultural chemists, one economic botanist, and a cotton specialist). The above officers are all recruited in England; there is also a considerable number of locally appointed officers.

There are agricultural colleges in six provinces, besides the Central College at Pusa which is intended to provide more advanced training. In every province there are experimental farms, the ultimate aim being that there should be one such for each large tract of country in which the agricultural conditions are approximately homogeneous. The Provincial Departments distribute selected seeds and manures and furnish advice as to implements and crops.

There is a Board of Agriculture which suggests and reviews programmes of work and discusses current problems. It held its eighth meeting at Coimbatore in December 1913. Agricultural memoirs and an agricultural journal are published.

**Pusa Research Institute and College.**—The experimental work carried out at the farm and laboratory by the specialists mentioned above covered divers cultivation experiments, problems of evaporation, soil temperature and drainage and the water requirements of crops, soil-bacteriology, especially in relation to the supply of nitrogen to the soil and green manuring. The economic botanist continued his wheat investigations. "Pusa" wheat has emerged from the experimental stage, and large distributions of the seed are being made in Bihar, the United Provinces, Central Provinces, and parts of the Punjab. It has been found to combine good yield and good milling qualities with great rust-resisting power and general hardiness. It can be successfully grown in all the great wheat tracts of India—dry or irrigated. Experiments are also in progress for producing a tobacco suitable for cigarettes, and the Department is also engaged on fruit-growing experiments at Quetta. Other subjects dealt with comprise rice disease, red-rot in sugar-cane, and sundry insect pests. The cotton specialist visited and reported on the various provincial cotton-growing stations.

The College is chiefly a higher teaching institution for post-graduate studies in one branch of research. During 1912–13 ten students were under training, of whom three were private students; others were sent by local governments and Native States and one by the Egyptian Government. Several visitors also worked at the Pusa laboratories. Nineteen students—mostly from Native States, attended the short courses in cattle management, sericulture, and lac cultivation.

**Bengal.**—There are six agricultural stations, each typifying a special area of the Presidency, besides farms at Kalimpong and Chittagong. Several important schemes were taken up in 1912–13; proposals have been submitted (which will take 10 or 12 years to carry out) for demonstrating agricultural improvements to the people

—a matter in which Bengal is handicapped owing to the absence of a subordinate revenue agency. An attempt is being made to solve the problem of improving cattle, and, in connection therewith, a dairy farm has been started at Rangpur. With a view to saving the silk industry of the province it is proposed to supply all the seed cocoons needed free of disease, and two new nurseries are being started for the purpose. Lastly, the system of obtaining jute forecasts is being improved. The Fibre Expert has demonstrated the financial advantages of employing bone and lime manure simultaneously on jute fields. Other experiments comprised the selection of rice and oilseeds and green manuring. Seeds are distributed from stores at Dacca and Sibpur. The agricultural associations were active, their members having experimented with various types of rice, potato, sugar-cane and other crops. Special efforts are being made to procure the co-operation of the zamindars.

The Fishery Department covers Bihar and Orissa as well as Bengal. Much demonstration was done, particularly as regards fish-curing and transport. An experiment for breeding *hilsa* from hatcheries failed owing to inability to procure a ripe male.

**Bihar and Orissa.**—There are four agricultural stations. The Indigo Research Station at Sirsiah has been closed. Experiments were conducted on the cultivation and boiling of sugar-cane (a crop of increasing importance in Bihar); various insect pests and plant diseases were combated with success—special attention being devoted to those attacking stored potatoes. A Provincial Agricultural Association has been formed for the new Province. The Divisional and District Associations (which receive grants from Government) are now required to follow definite lines of demonstration. Considerable activity is reported from the Divisional Associations; 132 wells were bored. The Bihar Industrial and Agricultural Exhibition was held at Bankipur, and the Department sent exhibits to 14 other exhibitions.

The Sabour Agricultural College contained, on 30th June 1913, 27 students, of whom only three were new. The steady decrease in numbers is attributed to the absence of prospects of employment, either Government or private. Short courses at Sabour for training sons of landowners and cultivators, and the training of cultivators on experimental stations are the other means adopted for spreading agricultural education. Seed, &c., are distributed at the agricultural stations; special arrangements are being made to distribute Pusa wheat.

**Assam.**—There are two agricultural stations, and a third has been proposed for the Surma Valley which will be suitable for rice experiments. A whole-time chemist has been sanctioned for the Province. Among other experimental work interesting results were obtained as regards rotation of crops applied to sugar-cane, and demonstrations as to the cultivation and manufacture of sugar were given. Terrace cultivation in gorges is being pushed by the Department to prevent denudation. Potato seed was distributed, and the people are being taught to spray their potato crops. A new fruit station has been opened, the old one being utilised for sericultural operations under the Roman Catholic Mission. Attention is being paid to the education of fieldmen demonstrators at the agricultural stations.

**United Provinces.**—The Agricultural College keeps up its membership, 51 students having entered during 1912–13, of whom 40 were nominees for the Subordinate Revenue Service. The latter are henceforth to be placed in a separate school, the College being confined to the education of agricultural students. Agriculturists receive practical training at the farms of the Department—a system which might usefully be developed. The Province is now practically covered by a network of experimental farms and seed stations, and a number of "recommended types" of seed of the various crops have been evolved. A suitable type of cotton for the unirrigated parts of Bundelkhand is, however, still to seek. The Pilibhit Sugar Factory was re-modelled by an expert and has scored a success which should encourage other private capitalists to embark in the industry. The area under cane is rising and Government seed is in great demand. Good types of wheat have been found for unirrigated tracts. Ground-nut cultivation has developed rapidly and no longer needs assistance from the Department. Implements recommended by the Department are sold by private firms: ploughs, sugar-mills, and chain-pumps are in special demand. The assistance of co-operative societies for distributing seed is encouraged. Four new demonstration farms were opened during the year. The post of Agricultural Engineer has been sanctioned.

**(Agricultural Departments.)**

**Punjab.**—There are agricultural stations at Lyallpur and Gurdaspur, and a cotton farm is to be started at Hansi. The falling off of candidates for admission to the Lyallpur College is a cause for regret. The explanation given is that in the Punjab agricultural qualifications do not command sufficiently good posts, private or official. Research and experiment dealt chiefly with wheat and cotton. The types of wheat best suited to the different tracts have been ascertained, and steps are being taken to multiply them. They are mostly Punjab wheats, but one Pusa type has proved successful. American cotton is firmly established in some tracts and is extending to others, and American seed is being prepared and sold at the Lyallpur Farm. With indigenous cotton the progress has been less satisfactory, and it has not yet been possible to determine on a type. Surveys of cotton and wheat have been undertaken. The boll-worm destroying parasite *Rhogas Lefroyi* can now be supplied when that pest occurs. Agricultural associations have been started in six districts, the members being largely members of co-operative unions. All members are expected to carry out some kind of practical demonstration on their own land. Implements are chiefly sold by private firms, who have during the year disposed of over 600 implements, mostly ploughs. A proposal has been made that land improved by use of modern implements should be exempt from increased assessment for five years.

**North-West Frontier Province.**—Experiments with imported crops were made at the Tarnab station with good results. Special attention was given to fruit trees, of which 30,000 were distributed in the Province free of cost. Peaches promise specially well.

**Central Provinces.**—Admissions to the Nagpur College were fewer than in the previous year, but contained a larger proportion of true agriculturists. A scheme is on foot to secure promising boys of the agriculturist class on leaving primary school by means of scholarships at Middle and High Schools. This should ensure the entrants having sufficient general education. All junior civilians (except those under training for the judicial branch) will in future have to take a short course in agriculture. There are now eight Government farms, most of which devote special attention to one feature, such as cotton, rice, wheat, and sugar-cane (the last a new venture). The cotton growers of Berar now grow almost exclusively the profitable *rosea* variety which is propagated by the Akola farm, which pays a handsome profit. The demand for pure seed exceeds the supply available from Government farms, but there are many private seed-farms. A most important result of demonstration work is the adoption of the system of rice-transplantation instead of the wasteful broadcasting system. Agricultural Associations are being reformed with a view to the concentration of the work of each on a definite object. About 900 implements were sold—there is a growing demand for cane-mills.

**Burma.**—There is little demand among Burma agriculturists for higher agricultural education, the bulk of them being small holders. A scheme is on foot for introducing the teaching of agriculture in primary and middle schools, in order that the people thus educated may be able to take advantage of the improved methods which the Department demonstrates. For the purpose of demonstration, district agriculturists are being trained. The co-operative movement is invaluable in putting improved methods before the members of societies. Experimental work at Mandalay and the new station of Hmawbi were concerned chiefly with rice selection. Besides these two stations there are small subsidiary stations where experiments were conducted on sesamum, sugar-cane, and cotton. A third station has been proposed for the dry zone. Many of the experimental gardens, having served their purpose, are being closed. As the Department develops, there is, of course, less experimental work done through district agency, but much still is done in this way. An extensive experiment in Lima beans is being conducted by the co-operative societies of the riverine districts.

**Madras.**—The Agricultural College has 41 students on the rolls out of a possible 60. There is a difficulty in selecting students who can cope with the scientific part of the curriculum, and who also find the practical work congenial; it is proposed to divide the curriculum into two courses—the later one to be of a more scientific character. There are now seven agricultural stations, besides the central farm at Coimbatore. Experiments to test exotic and indigenous sugar-canes took place at four farms. As regards rice, besides seed selection, experiments were made as to the most profitable seed-distance for beds. Much attention was paid to green manuring.

As regards cotton, successful results have been obtained from single plant strains. The sugar-cane expert took charge of the Coimbatore breeding station in October 1912. The Fisheries Department has been successful in stocking canals and rivers, and the oyster farm at Pulicat came into bearing during the year. There was a strong demand for cotton-seed from the seed depôt, and the effect of the pure seed is apparent in the crops. The single seedling method of rice planting is having a profound effect on the returns from this most important crop.

**Bombay and Sind.**—The Agricultural College at Poona, unlike the majority, shows an increase in the number of students, and the graduates have no difficulty in finding careers in official employ or otherwise. There is a keen demand for vernacular agricultural schools. These already exist at Poona and Mirpurkhas; others are being started. A farm has been started at Jalgaon for the distribution of pure cotton in Khandesh on the lines adopted in the Central Provinces. Arrangements have been made for supervising the sowing and cultivation and certifying the produce. An arrangement under which the Bombay Cotton Syndicate was to take over the cotton at 5 per cent. above market rate was terminated owing to disagreements. At the Darwar and Gadag farms experiments are carried out respectively on native and American and Cambodia cottons. As regards cereals, much useful experimental work has been done, but the results are local in character. Experiments in rice-transplantation show that a smaller quantity should be transplanted than is usually the practice; but the single-seedling method practised in Madras has not been successful in Bombay. The utility of prickly pear as an emergency fodder for cattle has been established, and other new sources of fodder have been experimented with. Co-operative seed and manure societies have been started. An agricultural engineer has been appointed.

## Civil Veterinary Department.

This Department is responsible for all official veterinary work other than that of the Army. Its duties are concerned with horse, &c., breeding, cattle-breeding, horse and cattle disease, and veterinary education. The total cost of the Department in 1912–13 was £158,401 (excluding expenditure by local bodies). The post of Inspector-General of the Civil Veterinary Department was abolished, with effect from 1st April 1912.

**Horse, Mule, and Donkey Breeding.**—In those districts of the Punjab, Baluchistan, the United Provinces, and Sind, in which the breeding of equines specially flourishes, the entire control of horse, mule, and donkey breeding was, in 1903, transferred from the Civil Veterinary Department to the Army Remount Department, the work of the former being confined to cattle. Outside these districts the Civil Department controls breeding operations of every sort. Government stallions are allotted only to selected districts, but the stallions provided in the non-selected districts, partly from District Board funds and partly from provincial revenues, aided by grants from the Government of India, are controlled by the Department. Of these, there were on the register at the end of 1912–13, 80 horse, 103 pony, and 106 donkey stallions. The total number of mares covered was 13,880. Most of the horse stallions are in the United Provinces, and of the pony and donkey stallions in the Punjab.

**Cattle Breeding.**—Owing on the one hand to the decrease in the grazing areas and on the other to an increase in the more profitable occupation of cultivating crops, there has been a decline in cattle breeding in most provinces. As regards bovines, veterinary operations are directed towards improvement of the breeds, investigation of diseases, inoculation, and maintenance of veterinary dispensaries. There were at the end of the year 89 Government bulls and 753 bulls owned by district boards, the great majority of the latter being in the Punjab. There were six provincial cattle farms, one each in the United Provinces, Assam, Bombay, Central Provinces, Bengal, and Bihar and Orissa, besides the most important centre of cattle breeding, the Hissar Government Cattle Farm, in the Punjab, which, in consequence of the abolition of the Inspector-General of the Civil Veterinary Department, has been transferred to the Provincial Government. This farm contained 30 herd bulls and 1,292 cows, besides a large number of young stock and cultivation bullocks, and some mules, donkeys, and sheep. The aim is to maintain a herd of 1,200 cows, so as to meet present

(Civil Veterinary Department.)

demands for ordnance bullocks and for bulls required by the districts and at the farm. A large number of cattle fairs and shows were inspected. Prizes are offered out of Imperial and local funds. The attempt to improve the breed of sheep by introducing merinos is proving a success in the North-West Frontier Province and the Punjab.

**Disease.**—(a) *Equines.*—Of 339 reported cases of glanders, over one-half were in a single district of Bengal. There were 238 cases of surra, mostly in Sind, and 49 cases of anthrax. The suppression of glanders has been greatly facilitated by the grant of compensation to owners of destroyed animals.

(b) *Cattle.*—Owing to the difficulty of collection, statistics of mortality from contagious diseases among cattle are defective. The number of reported deaths was 187,231, as against 201,814 in 1911–12. The deaths from rinderpest numbered 92,846, as against 82,991 in 1911–12. Assám, Burma, the United Provinces, and the Punjab were the severest sufferers. The reported deaths from anthrax numbered 12,655, of which Madras contributed 6,553. There were 28,086 deaths from kæmorrhagic septicæmia, chiefly in the Punjab (8,681), and 10,328 deaths from foot and mouth disease. Considerable progress has been made in breaking down the opposition of the people to inoculation, which was performed in 423,816 cases of rinderpest in 1912–13, despite a considerable decrease in the Punjab owing to the imposition of a charge for inoculation. There were also 32,988 inoculations for hæmorrhagic septicæmia, and 8,949 for other bovine diseases. The sera for inoculation were prepared at the Bacteriological Laboratory, Muktesar. The rinderpest serum prepared here is in great demand, both in India and Egypt. The Bareilly branch laboratory is being removed and enlarged in view of the increase of work.

The treatment of surra in camels is still in an experimental stage, but good results are being obtained from the latest methods, and the disease is on the decrease in the eight Silladar camel corps.

The progress of cattle-insurance schemes in Burma is noticed in the section dealing with co-operative credit societies in that Province.

**Subordinate Staff.**—Eighty-nine veterinary inspectors and 852 veterinary assistants were employed in 1912–13. Of these, 592 assistants visited on tour 104,211 villages and dealt with 473,942 cases. The veterinary hospitals and dispensaries, at which 656,487 animals were treated during the year, numbered 374.

**Veterinary Instruction.**—The number of students who graduated in 1912–13 at the four veterinary colleges, viz., the Punjab, Bengal, Bombay, and Madras, and the Burma Veterinary School was 135. There were 319 students under training at the close of the year, as against 422 at the end of 1911–12. The Punjab College has the strongest teaching staff and the greatest facilities for teaching, and it turns out almost one-half of the graduates. At present the classes are overcrowded. The staff is being increased by the addition of two European professors, and new buildings are to be erected. The Bengal College trains men for Bengal, Bihar and Orissa, Assam and Burma. The laboratories attached to the colleges were increasingly used. The demand for vernacular trained men as veterinary assistants still continues.

In the Muktesar Laboratory, researches were conducted on the preparation of rinderpest serum, the drug treatment of rinderpest, the treatment and transmission of surra, &c. Several memoirs have been published, chiefly on surra and rinderpest.

## Archæological Department.

The primary function of this Department is the conservation of monuments of historic and architectural interest under the Ancient Monuments Preservation Act, but exploration is undertaken so far as means and opportunity permit. In the North-West Frontier Province the important Buddhist ruins of Takht-i-bahi, were cleared and excavations have been started at Taxila 20 miles north-west of Rawalpindi where there are the sites of three successive capitals, dating from Alexander the Great to A.D. 300. Many interesting remains of the Greek, Parthian, and Kushan periods, have been unearthed. The Hellenistic character of the Parthian buildings has an intimate bearing on the question of the diffusion of classic ideas in India, and the discoveries have furnished important chronological data—especially as regards the introduction of Buddhism into the north-west of India. Conservation has proceeded

(Archæological Department.)

as usual among the great Mohamedan monuments of northern India, and the ancient Hindoo remains of the West. The Muttra excavations produced less of interest than in the previous year. Some important Chola inscriptions were decyphered in Madras. In Burma excavations proceeded at Pagan and Hmawza, and two more Pyu inscriptions were sent to England for decypherment; it is hoped that enough of these have now been collected to throw some light on that forgotten race.

## Medical Research Institutes.

In 1907 the Bacteriological laboratories in India were placed on a definite footing, and the Bacteriological Department now has 25 officers employed in the institutions named below or on special duty. In 1911 was instituted a Central Research Fund for research into epidemic diseases, with a government endowment of £33,000. Up to the end of 1913 the fund had received grants amounting to £106,667 and had disbursed £95,667, chiefly on researches into kala azar, cholera, yellow fever, anti-malarial measures in various provinces, a contribution to the Imperial Bureau of Entomology, an elaborate experiment on water filtration at Benares, and a subvention of £6,667 towards the new Calcutta School of Tropical Medicine. The fund is under an Advisory Board, and the former Central Malaria Bureau has become a sub-committee of the latter. The Research Fund Association publishes a quarterly "Indian Journal of Medical Research."

At the Central Research Institute, Kasauli, vaccines and sera were prepared as usual both for Government and private institutions, pathological and other specimens were examined and five classes were held in clinical bacteriology and technique. The Bombay Bacteriological Laboratory, besides its functions as Provincial Laboratory for Bombay, is the headquarters of the Plague Research Commission, whose seventh report, issued in 1913, dealt among other things with the immunity of Madras from plague, the varying susceptibility of rats, and the importance of the grain trade as a factor in plague distribution. At the King Institute of Preventive Medicine, Madras, the usual examination was conducted of pathological samples and samples of water supply, and the results have been published of researches on the morphology of bloodsucking flies and on kala azar. The work of the Pasteur Institutes is described on page 121. The establishment has been sanctioned at Rangoon of a Pasteur Institute which will also be a research laboratory.

# CHAPTER XIV.

## EDUCATION, LITERATURE AND THE PRESS.

(*For further details see Statistical Abstract for British India, Tables* 105 *to* 116.)

## Education.

**General.**—Educational institutions in India are of two classes :—

(1) Those in which the course of study conforms to the standards prescribed by the Department of Public Instruction or by the University, and which either undergo Inspection by the Department, or else regularly present pupils at the public examinations held by the Department or by the University. These institutions are called "public," but may be under either public or private management. To the latter class, for example, belong those "aided schools," receiving grants from Government or from local or municipal boards, which occupy so important a place in the system of Madras, Bengal, and other provinces.

(2) Those which do not fulfil the above conditions, and are called "private."

The system of education operates, generally speaking, through three grades of institutions, viz. :—

(i) Primary schools, which aim at the teaching of reading, writing, and such elementary knowledge as will enable a peasant to look after his own interests.

(ii) Secondary schools, which are divided into English and Vernacular. Those in which English forms part of the regular course of study of all the scholars, or at least of all the scholars in the higher classes, are counted as English schools ; if English is not taught, or is an optional subject only, they are reckoned as Vernacular.

(iii) Colleges, the students in which, having passed the matriculation examination of a University, are reading for the examinations required for a degree.

In addition to these, there are various institutions of a special character, such as technical schools teaching arts and industries, engineering and other branches of applied science ; law schools ; medical schools and colleges ; and normal schools for the training of teachers.

The general educational policy of the Government of India was declared at length in a Resolution published in March 1904, of which some account was given in the issue of this Statement for 1903–4 ; and more recently in the Resolution of 21st February 1913 of which a notice will be found in Chapter XXII. of the Fifth Decennial Statement published last year. Reference may also be made to the Sixth Quinquennial Report on Education in India, 1914, which has been widely drawn upon in the preparation of the following account :—

**Number of Students***.—The total number of scholars in public and private institutions in British India in 1912–13 was 7,149,669. This represents an increase in the quinquennium, 1907–8 to 1912–13, of 1,450,523, being at the rate of 25 per cent. Male scholars in public institutions numbered 5,559,841 as compared with 4,428,175 in 1907–8, while females numbered 928,983 as compared with 647,786. The percentage of male scholars in public institutions to male population of school-going age has increased during the five years from 23·1 to 28·4 and the percentage of females attending schools to female population from 3·6 to 5·0.

**Number and classification of Schools and Colleges.**—The total number of institutions in 1911–12 was 176,225, of which 160,152 and 16,073 were for males and females respectively. The total number of villages served by the schools was 582,728, and the number of towns, *i.e.*, places containing 5,000 inhabitants and upwards, was 1,594. Thus each institution for males served four towns and villages, and each institution for females served 39 towns and villages. The number of students in each class of

* These figures are to 31st March 1913.

school or college, classified according to the description of education imparted therein, was as follows:—

| | 1906–7. | 1911–12. |
|---|---|---|
| UNIVERSITY EDUCATION:— | | |
| *Arts Colleges:* | | |
| English | 18,001 | 28,196 |
| Oriental | 917 | 1,452 |
| *Professional Colleges:* | | |
| Law | 2,898 | 3,036 |
| Medicine | 1,542 | 1,396 |
| Engineering | 1,243 | 1,187 |
| Teaching | 362 | 552 |
| Agriculture | 205 | 267 |
| SCHOOL EDUCATION, SPECIAL:— | | |
| Schools for special instruction | 68,104 | 179,929 |
| SCHOOL EDUCATION, GENERAL:— | | |
| *Public Secondary Schools:* | 713,342 | 924,370 |
| High Schools | 298,276 | 407,765 |
| Middle English Schools | 204,271 | 294,801 |
| Middle Vernacular Schools | 210,795 | 221,804 |
| *Private Advanced Schools* | 60,792 | 55,200 |
| *Public Primary Schools* | 3,937,866 | 4,988,142 |
| *Private Elementary Schools* | 540,756 | 535,440 |

The figures for higher institutions were at 31st March 1913 as follows:—

| | Males. | Females. |
|---|---|---|
| In Colleges | 40,370 | 414 |
| In High Schools | 428,182 | 18,515 |
| In Middle Schools | 494,085 | 48,252 |

The figures for Primary Schools stood at the same date as follows:—Males, 4,428,531, females, 832,962.

**Stages of Instruction in Public Schools.**—The total number of scholars on the rolls of the general public schools, both secondary and primary, on the 31st March 1912, included 5,396,866 boys and 515,646 girls. Of these the numbers respectively of those who had passed beyond the Lower Secondary (Middle) stage and of those who had passed beyond the Upper Primary stage were, boys, 139,151 and 263,346, girls, 2,544 and 13,055. In the Secondary Schools there were 513,825 boys and girls receiving primary instruction. In the Primary Schools 397,276 boys and 36,470 girls had passed the Lower Primary stage and there were 2,644,335 boys and 422,790 girls reading printed books, and 1,156,043 boys and 323,677 girls not reading printed books.

**Results of University Examination.**—While the number of English Arts Colleges has fallen, during the quinquennium, from 127 to 123, that of students had grown on 31st March 1912 to 28,196, of whom 279 were women. The increase in the numbers, from 18,001 to 28,196, *i.e.*, by over 10,000 attending English Arts Colleges is very noticeable.

The following statement shows the number of examinees for the attainment of the University degrees named, the number passed, and the race or creed of the passed scholars in 1911–12.

(Education.)

| | Number of Examinees. | Number Passed. | Race or Creed of Passed Scholars. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Europeans and Eurasians. | Indian Christians. | Hindus. Brahmans. | Hindus. Non-Brahmans. | Muhammadans. | Parsis. | Others. |
| Bachelor of Arts | 4,358 | 2,477 | 20 | 119 | 1,300 | 745 | 220 | 45 | 28 |
| Bachelor of Science | 461 | 265 | — | 4 | 107 | 137 | 7 | 6 | 4 |
| Bachelor of Oriental Learning | — | — | — | — | — | — | — | — | — |
| Bachelor of Law | 1,530 | 741 | — | 11 | 279 | 368 | 55 | 22 | 6 |
| M.B. | 14 | 6 | — | — | — | 5 | 1 | — | — |
| B.C.E. | 34 | 24 | — | 1 | 15 | 8 | — | — | — |
| Roorkee { Civil engineer | 84 | 52 | 5 | — | 32 | 7 | 2 | 6 | — |
| Roorkee { Electrical engineer | — | — | — | — | — | — | — | — | — |
| Licentiate of Agriculture | 57 | 48 | — | 1 | 26 | 18 | 3 | — | — |

The increase in the number of candidates for the degree of B.A. is remarkable, and corresponds to the increase in the number of students. In 1910–11 there were 2,543 candidates, and 1,293 passed. The percentages of passed to candidates for the two years 1910–11 and 1911–12 are 50·8 and 56·8 respectively.

It is interesting to observe the different proportion of the students attending the various classes of colleges who proceed to a degree. The proportion is highest in the case of law and lowest in the case of colleges for Oriental learning. The following statement shows the average number of students in each class of college and the number who appeared for and passed the B.A. or equivalent examination during the years 1910–11 and 1911–12 :—

| | 1. Average Number of Students in last Two Years. | 2. Average Number examined for Degree. | 3. Percentage of Col. 2 to Col. 1. | 4. Average Number passed. | 5. Percentage of Col. 4 to Col. 2. |
|---|---|---|---|---|---|
| Arts Colleges—English—B.A. | 25,685 | 3,955 | 15·2 | 1,855 | 47·0 |
| Arts Colleges—English—B.Sc. | | 440 | 1·7 | 260 | 59·0 |
| Arts Colleges—Oriental—Bachelor of Oriental Learning | 1,413 | — | — | — | — |
| Law Colleges—B.L. | 2,904 | 1,620 | 55·7 | 774 | 47·9 |
| Medical Colleges—M.B. | 1,508 | 28 | 1·8 | 12 | 42·8 |
| Engineering—B.C.E. | 1,206 | 24 | 1·9 | 18 | 75·0 |
| Engineering—Roorkee—Civil engineering | | 59 | 4·8 | 41 | 69·4 |
| Engineering—Roorkee—Electrical engineering | | 1 | ·08 | 1 | 100·0 |
| Agricultural Colleges—Licentiate of Agriculture | 274 | 66 | 23·3 | 51 | 77·2 |

**System of Management.**—The new Department of Education in the Government of India was created in 1910. There is, further, in each province, save in Coorg, a department of Public Instruction, subject to the Government, the operations of which are co-ordinated with the general policy of Government. Subject to this general condition, each department under a Local Government advises as to educational needs, administers the funds allotted, inspects, examines, frames rules and prescribes curricula. Its controlling powers, however, are shared, as regards higher education, with the universities, and, as regards elementary education, with the civil authorities and the local and municipal bodies. The great majority of institutions are maintained by the boards or by private agencies, which in turn may receive aid either from the board or from the department. The inspectors, professors, and teachers are grouped in various services. The teachers are employed mainly in the higher institutions, and, even in these, represent only a small portion of the total number, the majority being in private employ. Nearly all the teachers in primary schools are board or municipal servants or work in aided institutions. The Government services are the Indian Educational, recruited in England, the Provincial, recruited by the Local Government, and the Subordinate, also recruited by the Local Government and like the Provincial consisting in the main of Indians. The Inspecting Agency is, with minor exceptions, included in the Government services. A beginning has been made during the quinquennium of inspection for special subjects in the ordinary schools, *e.g.*, drawing, manual training, and also of a demand for medical inspection.

The civil authorities are concerned with education as being in general charge of all branches of administration in their jurisdiction; and the co-operation of the executive with the educational officer in educational work is at once beneficial and necessary. The bulk of elementary education is in the hands of municipal and district boards, which not only maintain schools but also disburse grants to schools maintained by private bodies or persons. In the discharge of their duties of control, including the closure of their own schools, the appointment and dismissal of staff and the disbursement of aid to privately managed schools, the boards are guided by rules issued by the Local Government. The curriculum is that prescribed by Government; and the scale of grants to aided institutions must be generally in accordance with the departmental rules. A cause for complaint is that the members of the district boards often have little or no knowledge of the villages where schools are situated and of the work done by these schools. Private agencies are a factor of great importance in the educational system, and include missions, Indian societies and committees, and individual managers, who are generally also the teachers. Thousands of elementary schools in Bengal are of the proprietory or "venture" type. All are eligible for grants provided they fill a need and serve a useful purpose, and they subsist partly by fees and subscriptions, partly by grants from public funds. As controlling agencies the Universities are of prime importance, since they frame courses, conduct examinations for diplomas and degrees, affiliate and inspect colleges, and prescribe the curricula in the upper classes of high schools preparing for the matriculation examination. Finally, there are a number of committees, text-book, visiting, ladies for girls' schools, and governing bodies and committees for the detailed control of individual institutions.

**Female Education.**—There seems to be a difference of opinion whether there has been any very real progress in the education of girls during the quinquennium. But the statistics at least are eloquent. The number of girls, Europeans and Indians, at school has increased from 645,028 in 1907 to 952,539 in 1912, an increase of 47 per cent.; while the percentage of girls at school to girl population of school-going age has during the same period advanced from 3·6 to 5·1. As regards race and creed the most remarkable increase was that of Muhammadans. The increase in literacy during the quinquennium has been proportionately much greater in the case of girls than among boys, representing an advance of 61 per cent. in the former and 15 per cent. in the latter. On the other hand, the proportion of female literates of 20 years and upwards is very low. The ratio of literate females per mille rose during the quinquennium from 7 to 10. The practice, however, which obtains in Madras, of keeping girls at school beyond the age of eight is by no means universal; and the figures must, in consequence, be cautiously received.

The number of colleges specially intended for Indian women is 6 and their students are 124. The total number, however, of women under collegiate instruction was 369. The great majority of girls learn in primary schools; but in secondary schools, exclusive of vernacular middle schools for Indian girls, which number 178, there were 20,058 pupils. A problem which still requires solution is the discrimination desirable between the secondary curriculum for boys and girls respectively. Nearly half the total number of girls attending school read in boys' schools. Opinions are divided as to the merits of this co-education, but it generally amounts merely to the attendance of little girls in primary schools for boys.

The professional training of women is confined to medicine and teaching; there are 55 women in medical colleges and 227 in medical schools, and there is a proposal to combine Lady Hardinge's scheme for a school to train Indian nurses and midwives with the Medical College for women at Delhi. Girls studying industries totalled 3,017, of whom 201 only were Europeans and 1,372 were Indian Christians. There is an almost universal complaint of the scarcity of women teachers. Owing to the dearth, female teachers can command a higher wage than male teachers. The attendance of non-Christian girls at schools is tolerated up to the age of twelve, but the idea that they should take up teaching professionally is generally regarded with abhorrence. The deficiency, which is most marked in the case of elementary teachers, is as a rule met by appointing men who are considerably past the prime of life. Improvement, however, though sporadic, is reported. There were 85 institutions for training mistresses with 1,508 pupils only against 63 with 1,278 in 1907. In that year, further, there were 14 inspectresses, whereas in 1912 the sanctioned strength was 21, of whom 12 were in the Indian Educational Service; and a general movement is reported all along the line.

**(Education.)**

**Cost of Education.**—The total cost of the educational system is shared almost equally between public and private funds. By the former are meant provincial revenues (*i.e.*, the revenues of the Local Governments) and municipal or district board funds. The Imperial Government gives back part of the revenue which it receives by the occasional distribution of sums for set purposes, *e.g.*, for education; and there were large Durbar grants made in this way. Municipal and district or local boards levy cesses, but the income so resulting is generally increased by Local Governments, either by equilibrium grants or by special grants. In general, the whole of the provincial expenditure on education is met from provincial revenues which are from time to time enhanced by imperial grants.

The total amount spent upon education has increased during the quinquennium from £3,726,911 to £5,239,507, *i.e.*, by 40 per cent., to which total public and private sources have contributed in about equal proportions. The imperial grants during the period to 1913 have amounted to £3,161,133 in non-recurring, and £766,667 in recurring grants.

The average cost of educating a pupil has risen from 11*s.* 4*d.* to 12*s.* 5*d.* The statement below shows for 1906–7 and for 1911–12 the average annual expenditure and the average annual fee per pupil in certain colleges and schools.

| | Average Annual Expenditure. | | Average Annual Fee per Pupil. | |
|---|---|---|---|---|
| | 1906–7. | 1911–12. | 1906–7. | 1911–12. |
| | £ *s.* *d.* | £ *s.* *d.* | £ *s.* *d.* | £ *s.* *d.* |
| Arts Colleges | 11 16 0 | 11 13 4 | 4 2 4 | 4 9 4 |
| Secondary English Schools for boys | 1 13 6 | 1 14 9 | 0 17 4 | 0 18 10 |
| Primary Schools for boys | 0 4 3 | 0 5 4 | 0 1 2 | 0 1 2½ |

**Hostels or Boarding Houses.**—There were in 1912, 2,796 hostels or boarding houses attached to colleges and schools with 107,383 boarders. Five years ago the figures were 1,930 hostels with 78,412 boarders, while the total expenditure has increased from £244,780 to £364,822 per annum. The Government of India has recently made grants for hostels amounting to £900,000 capital and £33,330 recurring.

The following statement shows the number of boarders attached to each class of schools or colleges:—

| | 1911–12. |
|---|---|
| Arts Colleges | 8,518 |
| Professional Colleges | 1,919 |
| Secondary Schools | 62,190 |
| Primary Schools | 22,904 |
| Special Schools | 11,852 |

Some further facts illustrating the present general situation of education in India are given.

One of the most striking events in the quinquennium was the opening by Sir Harcourt Butler, the Education Member of the Viceroy's Council, of the Islamic College of Peshawar, effect being thus given to the movement of the frontier tribes for collegiate education. There are movements for Hindu and Muhammadan universities at Benares and Aligarh respectively, and for a teaching local university at Dacca.

In secondary education there have been attempts on the part of certain local governments to improve and thereby popularise the teaching profession. The demand for English education is increasing enormously. Several provinces have raised substantially the fee rates in secondary schools and colleges without any apparent diminution of the number of students. An important feature has been the growth of a system of school-leaving certificates or examinations. The matriculation examination has not met with universal satisfaction.

In primary education the Government of India, while rejecting the proposals for compulsory attendance at schools, has urged the extension of facilities and a system of surveys which should place elementary teaching within the reach of all who may desire it. Attempts are being made as funds permit to improve the condition of the

teachers, and consequently their quality. In spite of efforts, 39 per cent. of those educated relapse within a few years into illiteracy. On the other hand the percentage of those at school to the total population has increased in the decade from 1902 from 1·9 to 2·7, while 17·7 per cent. of the population of school-going age are now at school as against 14·8 five years ago. These percentages are based on the figures supplied by the census of 1901 and that of 1911, and the latter, it must be remembered, exceeds the former by over 14,000,000 persons. The increase is, therefore, large.

There has been considerable activity in professional education, and in industrial and technical institutions. A conference was summoned in 1911 at Simla to discuss the whole question of reviving Oriental studies, which appeared to have fallen under a cloud, and the establishment of an Oriental Research Institute has been approved in principle. The number of girls undergoing instruction has increased during the quinquennium by 47·7 per cent., and that of Muhammadans by 32·3 per cent.; and this community now holds its own in the matter of primary education. The Islamic Colleges of Lahore and Peshawar, and the projected universities at Dacca, Aligarh, and Benares, are evidences of a desire for the pursuit of higher studies. The training of teachers has received the earnest attention of Local Governments, and every large province is now provided with one or more secondary training colleges.

The following is a short summary of some of the more interesting features of the year's record in the several provinces.

**Madras.**—In the Madras Presidency there were 889,393 and 223,835 male and female scholars in 25,223 and 1,231 primary schools for boys and girls respectively. Secondary schools numbered 370 for males (with 108,534 scholars) and 68 for females (with 9,086 scholars). In the 29 Arts and 3 professional colleges for males there were respectively 5,491 and 1,015 students. The year saw a marked advance in regard to Elementary Education; the percentage of male pupils under instruction in Public Elementary Schools to the male population of school-going age increasing from 27·1 to 29·1. Efforts are being made to train the increased number of teachers created by the growth in the number of schools; the re-organisation of training schools for masters was carried so far as practicable before the close of the year; and the scheme for the reorganisation of the training schools for mistresses was completely effected. Three new training schools were opened. Proposals for starting additional training schools for non-European mistresses to meet the fact that the supply of qualified women teachers is unequal to the demand are under consideration. During the year a new Government Secondary School for girls was opened at Vizayapatam. There is evidence which seems to indicate a growing desire on the part of the community to educate their daughters beyond the elementary stage; while, further, the increase in the number of girls undergoing elementary instruction in all classes of institutions totalled about 24,000. The total expenditure for the year was £1,050,819, an increase of 16 per cent. on the amount for the previous year.

**Bombay.**—The scheme for the improvement and development of secondary education in the Bombay Presidency received final approval during the year, and some effect was given to nearly all the items included. The salaries of the teachers were improved, and the special wants of the schools were met with the help of a recurring grant from the Government towards the close of the year, but too late for it to be possible to speak of results. The record of activity in the matter of primary education was not less great. Schools increased from 11,609 to 12,169, and pupils from 672,391 to 723,815, while the total number of girls under instruction improved from 126,703 to 136,378. There was an increase of 660 in the number of institutions, and of 64,808 in the number of pupils; in public institutions, *i.e.*, those under Government inspection, the number of male pupils increased from 707,328 to 761,435, and the number of female pupils from 134,981 to 145,392. The percentage of all pupils under instruction to the general population rose from 3·3 to 3·6. By the aid of the Durbar grant arrangements were made to increase the annual output of second-year trained teachers by 146, and the number of trained mistresses by 38. During January and February, Mr. F. J. Gould, of the Moral Education League, made a tour of the Presidency, and the meetings at which he demonstrated his method of imparting direct moral teaching aroused much interest. The total expenditure on education rose from £907,835 to £1,023,180.

**United Provinces.**—The report of the United Provinces for 1912 on Education is on the whole satisfactory. Here, too, as generally elsewhere the greatest activity and progress



134465

(Education.)

were shown in primary education, for which the grants made by the Government of India were chiefly responsible. New schools were opened, old schools reopened, and extra teachers appointed. The opportunity created by this advance was taken to make careful surveys of their districts by the inspecting staff, and programmes for the future were prepared. In general, there was an increase of 1,017 in the total number of institutions, of which 983 were public; while the number of scholars of all kinds at the close of the year was 788,298, an increase of more than 10 per cent. on the last year's figures. As regards primary education, evidences of the genuineness of the demand for education were widespread. Out of the total number (541,416) of scholars in the primary schools only 55,906 were reading in upper primary classes. An increased supply of competent teachers is a desideratum, but it is hoped that the opening of 101 training classes, sanctioned during the year, will do something to meet this deficiency. The whole subject of primary education was considered by a Representative Committee, which has since submitted a Report. The demand for English education continued to increase, and it was found difficult to accommodate all the applicants. Two new aided high schools and four English middle schools were opened. It has been decided to open a second lower grade training school. Attention was directed to improvement of, and additions to, hostels for Government high schools. There was little progress to record in the matter of female education; and the difficulty of securing teachers continued to be a serious obstacle to any rapid advance. There was considerable activity in the provision of hostels for the Arts Colleges, the number of students in which increased by 297. Two Inspectors were appointed to review and report on the general question of Oriental studies. In education as a whole the Muhammadans held their own with the Hindu community. The technical schools at Lucknow and Gorakpur, the school of arts and crafts at Lucknow, and the carpentry school at Bareilly, showed satisfactory progress: the two former are now well equipped, and the installation of the machinery was carried out by the staff. The higher branches of technical education remained stationary, but opinions have been called for on a resolution which surveyed the whole situation. The total expenditure on education from all sources rose from £719,522 to £807,976.

**Punjab.**—The year was one of considerable development in many directions. The liberal grants sanctioned by the Government of India for education rendered it possible to open a large number of new primary schools, to provide grants for aided schools on a more liberal scale than formerly, and to give effect to building schemes all over the province. Institutions and pupils showed a numerical increase which would have been larger if the separation of the new Delhi province had not lowered the statistics, and educational expenditure rose by 22 per cent. Some figures are given by way of illustration. Primary schools for males increased by 272 to 3,689, and for females by 72 to 709; male attendance in primary schools improved by 18,075 to 197,663, female attendance by 2,594 to 31,685. Including schools of all kinds, the percentage of scholars to the estimated population of school-going age rose, in the case of boys, from 19·84 to 21·37, and, in that of girls, from 4 to 4·31. The total educational expenditure rose from £457,660 to £561,385.

**Central Provinces and Berar.**—In this year 1912-13 the effect of the generous grants for educational expenditure made by the Government of India were for the first time appreciably felt, and expansion was very rapid, especially in the direction of primary education. Schools and scholars rose by 257 and 20,982 respectively; and for these the application of the Durbar grant to the extension of vernacular education was mainly responsible, accounting for 209 schools with about 18,000 pupils. The prominent feature of the year was the expansion of primary education which this grant rendered possible. The demand for collegiate education is expected shortly to exceed the accommodation available. The training college at Jubbulpore did excellent work, and the demand for enrolment already exceeded the accommodation; but the training of teachers is a serious problem in secondary education. The year was marked by the establishment of the Government Girls' High School at Amraoti and the raising of two aided middle schools to the high school standard. The total expenditure on education rose by nearly £35,000 to £243,925.

**Burma.**—The figures for the year 1912 showed an increase of boys at every stage of instruction from the lower primary to the collegiate, and of girls at every stage except the last. The increase was most gratifying in the middle school and high-school stages, and especially the latter, where boys and girls have increased by 25

and 22 per cent. respectively. In the lower primary stage the percentage of increase in the case of girls was double that of boys, a remarkable result. To this increase in the number of pupils corresponded increased efficiency in all stages of instruction. Special classes for elementary teachers were instituted, and the scheme, which is of far-reaching importance, will permit of expansion as funds are forthcoming. The non-recurring grants made by the Government of India made development possible in all directions, while the recurring grants were allocated to the improvement of salaries, and to the establishment of the special classes referred to and of manual training centres in vernacular schools. Collegiate education continued to attract an increasing number of students; and a scheme for the Burma University, which now appears to be within reasonable distance of establishment, was submitted to Government. The total expenditure on education in the Province during the year amounted to £355,734.

**North-West Frontier Province.**—The year under review was one of rapid and solid progress. One hundred new primary schools were opened during the year, while the staff, accommodation, and equipment were greatly improved. Education was made free in all primary schools and departments under public management, with effect from 1st April—a measure which has met with much appreciation and has had excellent results. Though there was some reduction in the number of girl-scholars, the attendance at schools of boys of school-going age increased in a marked degree. As regards secondary education, the flow of scholars into the secondary departments was not checked by the uniform enhancement of fees, and the total receipts from fees at the advanced scale more than compensated for the loss in the primary departments. The Islamia college and school were sanctioned during the year, and the school was opened by Sir H. Butler at the end of the year. The inspecting staff of the province was strengthened, and the normal school, whence comes the supply of teachers, continued to flourish and expand. The profession of teaching is becoming more popular. For the first time in the history of the province a comprehensive and systematic policy of education was prescribed and carried out. The educational service was reorganised, and a definite plan for the future was brought into existence. Total expenditure increased from £28,567 in 1911–12 to £64,146* in 1912–13.

**Assam.**—The constitution of Assam in April 1912 as a separate province inevitably necessitated reorganisation. The receipt of large recurring and non-recurring grants from the Government of India enabled the Local Administration to consider the introduction of various reforms. It may be said generally that the reforms which are contemplated are far-reaching and thorough in character; but that the necessity of reviewing the situation and the educational policy of the new province did not permit much practical activity in this direction during the year under review. Further, the recent publication of the census figures for 1911 has shown the unsatisfactory character of the results already achieved and the difficulties of the problem. The figures show that only 4·71 of the population could be described as literate, although during a period of 12 years there had been at school an average of some 15 per cent. of the children. It is calculated that, as regards the elementary education of boys, there is a wastage of some 70 per cent. of the school attendance before what may be termed the literate class is reached. The following is a brief account of the year's doings. In collegiate education the Murarichand College, Sylhet, was taken over by the State; and a scheme has been submitted for a law college at Gauhati. There was a substantial increase in attendance at the high and middle English schools, but there is still a great gulf between education on purely vernacular and on Anglo-vernacular lines, and vernacular schools are far from popular. The results of primary education remained most disappointing, the majority of pupils leaving school illiterate. There was no increase during the year in the provision of facilities for the training of teachers; but the question is under consideration. Female education made satisfactory progress; and as regards Mahommedan education a Government Madrasa was established at Sylhet. The question of technical and industrial education was under consideration during the year. Expenditure on education rose by nearly £20,000 to about £127,000.

**Bengal.**—As Bengal was one of the provinces affected by the redistribution of territories in April 1912, comparison of the figures for 1912–13 with those of previous

* This figure includes certain Imperial grants and Provincial contributions.

years is misleading, and no comparisons therefore are here made. The figures given below, unless otherwise stated, are for the year to 31st March 1913. The total number of public institutions for males was 28,670, for females 6,822. These figures included, for males, 31 arts colleges and 532 high schools with 12,791 and 164,244 scholars, and, for females, 3 arts colleges and 21 high schools with 105 and 3,090 scholars. By far the majority of the female students are, as is natural, in primary schools; whereas in Bengal the demand for higher education on the part of the male students is very great. The number of male and female scholars in public institutions were, respectively, males 1,435,452, females 227,313. There were in all institutions 1,718,623 male and female scholars. The percentage of male scholars in public institutions to male population of school-going age was 40·9; the same percentage for females was 6·8; and this last figure, though small, represents an improvement. In both cases the percentages represent an increase on the figures for previous years, although it must be remembered that the population of the new presidency is smaller than that of the old province. One of the most striking features of educational development in Bengal of recent years, since the new University regulations were introduced five years ago, has been the adoption by the Calcutta University of direct teaching as well as examining functions. The University now has power to appoint Professors, Lecturers, and Readers. The accommodation in the affiliated colleges is insufficient to meet the natural growth in the number of University students, and the solution of this problem is one of the many questions engaging the attention of the Department. Another question is that of the Matriculation examination or school-leaving certificate, but the solution of this seems to depend upon the ability to improve the pay and prospects of the secondary school teachers, and thereby improve the status of the teaching profession. As regards professional and technical education, the reconstitution of the province made necessary the reconsideration of the whole question of the future of the Sibpur Engineering College; and the matter was referred at the beginning of 1913 to a representative committee. The separation of the various activities of the College and their removal to more convenient centres has been settled in principle. The proposal for a Technological Institute at Calcutta is still under consideration. The expenditure for the year on education totalled £1,351,433.

**Bihar and Orissa.**—The establishment of the new province in April necessarily caused a certain amount of dislocation of educational work; and, although it was necessary first to take stock of the situation and to appoint committees to review and to report upon the various branches of the department with a view to the formation of a definite plan for the future, the year was nevertheless one of considerable activity. The actual expenditure, for example, was considerably in excess of the budget estimate. Many schemes as regards the development of the Arts College depend upon the final form to be taken by the proposed Patna University. A Representative Committee was appointed to consider this question, towards the close of the year. The staff of the Cuttack College was increased by the addition of three professors and a lecturer. The scheme for the improvement of secondary education is being gradually introduced. As regards primary education, there was a steady increase in the number of schools and pupils; a large part of the Imperial grant was utilised in increasing the stipends of the teachers. The scheme for the development and enlargement of the Bankipore Training College was settled. The most important feature of the year was the construction of buildings for the government training schools, their hostels and teachers' residences. A notable feature was the rapid rise in the number of aborigines under instruction, a result due to the efforts of the missionaries. A special committee was appointed to consider the whole question of Mahommedan education.

## Literature and the Press during the Calendar Year 1912.

**Bombay.**—The Indian Press Act of 1910 did not affect the quantity of the literary output. 2,605 publications were registered, as compared with 2,200 in the previous year. The total increase is made up chiefly of an increase of 160 under the heading Miscellaneous, 97 under Religion, and 37 under Poetry. In History and Politics the number has fallen, one original work only on this latter subject having been registered. There was an increase under Biography, Drama, Languages, Science (Mathematical and Mechanical), Science (Natural and other), and under Voyages and

Travel. Fiction and Philosophy both showed an increase of 33 to 146 and 79 respectively. English books rose from 76 to 167 and Marathi and Gujarati books from 308 and 426 to 413 and 533. Notable English books were:—*A Memoir of the Khandesh Bhil Corps*, by A. H. A. Simcox, I.C.S.; *The Religion of the Iranian Peoples*, by Dr. Tiele; and *The Old Testament of New India*, by G. R. Mokasi, an attack by a Brahmin upon the religious extravagances of New India. In Marathi an adaptation of *All's Well that Ends Well* was published, and noteworthy children's books in the vernacular were a collection of stories adapted from the Arabian Nights, and a *Pictorial and Entertaining History of India*, both by V. G. Apte. In Gujarati a translation of Lecky's *Rationalism in Europe* was made for the Gujarati Vernacular Society by D. P. Raval.

**Madras.**—The Indian Press Act did not in any way deleteriously affect the literary outturn of the Presidency during the year 1910 and the number of political books registered during the year was the same as in the previous year. All were reported to be unobjectionable in character. There was a further appreciable increase in the total number of publications registered during the year, from 3,722 in 1911 to 4,098 in this year. It may be remarked that the number has nearly doubled itself in the five years from 1908, in which year the total number was 2,207. Religion was again the subject which had the largest number of books devoted to it. Travels and voyages were unrepresented. As regards the languages, Tamil again, as in 1911, occupied the first place, and was closely followed by English with Telugu for a bad third. There was a slight falling off under Arabic and Sanskrit, and a noticeable increase under Malayalam, Kanarese, and Uriya. A Savara grammar, prepared at the request of Government, a Chick grammar in the Garo language, and a Jaina religious book in Prakrit were especially noteworthy publications. The following individual works may be noticed:—*Indian Industrial and Economic Problems*, by Professor V. G. Kale, M.A.; *Minakshi Sundaram*, by A. Natesa Pillai, a novel in Tamil which reflects the author's study of Horace Walpole and Mrs. Radcliffe; and a Tamil adaptation of *Cymbeline*. A noteworthy historical work was *Peishwa Narayana Rao*, by M. T. Vallabha Aiyangar, dealing with early Mahratta history.

**Bengal.**—The redistribution of territories effected during the year made it impracticable to judge the effect of the Press Act of 1910 on the literary output of the year as compared with that of the preceding year; but in general it may be said that the year was richer than its predecessor in the quality of its literature. Denunciation of Government is now less conspicuous than a desire on the part of able Bengali writers to devote their talents to the service of the cause of literature and to the advancement of the knowledge of their countrymen.

In biography a notable work was *Jivana Smriti*, an autobiographical sketch in Bengali by Rabindra Nath Tagore, whose works in English are at present enjoying so great a success and who was recently awarded the Nobel prize for literature. The literature under the heading Drama was mostly worthless in character, but a noteworthy social drama was *Grihalakshmi*, by the late Babu Giris Chandra Ghosh, whose death last year was a severe loss to the Bengali stage and drama. A number of good works of fiction were published, amongst which may be noted *Navin Sannyasi*, by Prabhat Kumar Mukharji. History showed a decrease in the amount of out-turn, but in point of quality was fully equal to the standard of the previous two years. The year saw the publication of the first two volumes (five are contemplated) of a *History of Aurangzib* in English by Professor Jadu Nath Sarkar, M.A., of the Provincial Educational Service. Under Science there was evidence of improvement, some attempt at original research being shown. The Royal Visit during the year was responsible for a number of plays, miscellaneous books, and poems, which were marked by expressions of joy and loyalty. A meritorious translation of *Comus* in Bengali was published. There was an increase in the number of periodicals published, many of which were ably conducted and well illustrated.

**United Provinces.**—The total number of publications issued during the year, 1,706, was practically the same as in the previous year; of these nearly half were poetical or religious. There was some increase in the number of books in English and Urdu, but Hindi remained by far the predominant language. The standard of quality did not show improvement, and publishers seem to be chiefly influenced by the prospect of "quick returns" and careless about the production of "literature." Interesting experiments in poetry were the desertion by the modern school of Hindi poetry of the

**(Literature and the Press.)**

Braja dialect for the Khari Boli and of the traditional style and metre. The poems in question showed a greater variety of these, including even blank verse, hitherto considered foreign to the spirit of Hindi poetry. There were several valuable additions to Islamic works including a translation into Urdu of a Persian work in Islamic ethics. The second volume of a new edition of the *Quran*, edited by Mirza Abul Fuzl was a careful and meritorious production. Urdu literature was enriched by the publication of the second of the *Wazirs of Islam* series, dealing with Nizam-ul-Mulk Pusi, a famous minister of the Suljukids (1017 to 1092), by Muhammad Abdul Razzak. The year saw the publication of a *Who's Who in India*, unfortunately marred by gross carelessness and inaccuracy. A notable publication in Hindi was a little book of literary criticism on Kalid as a poet and writer. There was a decline in the number of scientific and mathematical works and of law books. The five political works published, all dealing with imperial politics, were valueless. The increase in the output of novels was not accompanied by a corresponding improvement in quality. One novel, *Jalwa-i-Isar*, a story of patriotism by Nawab Rai, stood out above the rest.

**Punjab.**—The aggregate number of publications during 1912 (1,532) was 33 fewer than that of the previous year, a result which was due to the adoption of a different method of classification. There was a marked decrease in the number of original vernacular works, which, coupled as it was with a downward tendency in the case of translations, denoted a want of activity on the part of vernacular authors. Since the passing of the Press Act of 1910 political works have practically disappeared; and two only appeared during the year, of which one was a translation from the Japanese of a work on the future of the British Empire. There was a considerable increase in the number of English publications issued; and publications in Urdu, in spite of a decrease, were again the most numerous. As regards subjects, poetry came first followed by religion. There was an increase of 16 in the number of biographies, but they continued to be ill-digested and uncritical. Noteworthy publications were two novels in Urdu based on the celebrated epics, *Ramayana* and *Mahabharata*. *Riwaj Punjab* by Mr. Badr-ud-din, was a work on the customary law of the province which has been recognised by the Judges of the Chief Court as a standard work. Almost all the books classed under the heading Mathematical and Natural Science were ordinary school-books.

**Burma.**—The total number of publications registered in Burma for the last five years is as follows:—1908, 221; 1909, 246; 1910, 373; 1911, 362; and 1912, 338. Since 1910, therefore, there has been a steady general decrease spread over all classes of books. Fiction, however, continued to show a steady increase, from two in 1910 and seven in 1911 to 13 in this year. The number of dramatic works fell to 37, of which 36 were in Burmese and the other, in English and Burmese, was a translation of *As You Like it*. The drama, in spite of a decrease in number, retained its popularity and its coarseness. Fiction, which is on the increase, showed no improvement in moral quality; the one work in Tamil, however, was reported to be quite unobjectionable and well-written. Interesting departures were, *A Manual of Housekeeping*, by a Burmese lady, and a book describing in Burmese the English system of book-keeping. There were 130 publications under religion, including one treatise by the Ledi-Sayadaw. There was no political and one poetical work issued. As regards languages, which dropped from 19 to 11, 22 were in English, 187 in Burmese, and 52 in Pali. A new language was Kachin, into which parts of the New Testament were translated. There was a large increase during the year in the number of newspapers, chiefly English and Burmese; but how many were withdrawn from publication it was not possible to ascertain.

**Assam.**—The total number of publications was 44, as against 40 in 1911, of which 19 were classified under religion, and 7 under poetry. The books were, without exception, free from offence. The backwardness, from a literary point of view, of the province may be judged from the fact that, such as it was, the most important publication during the year was probably a versified adaptation of an old Bengali version of *Padma Puran*. The vernaculars are, on the one hand, coloured by English, while English has not yet been so mastered as to serve as a medium for the literary expression of ideas; it serves merely for utility. The two English publications were a Calvanistic tract and a legal compilation for the use of students. In Assamese the demand is as poor as the supply, so immature is the vernacular education in the

Assam valley; nor is the output in Bengali less trivial. The continued publication of a few works in Nagri and in Musalmani-Bengali was interesting. The Welsh Mission in the Khasi Hill was productive of some result; the literary out-turn of this little hill race, crude as it was, was yet more significant than that of the more sophisticated peoples of the plains; and although the majority of the publications were religious in subject, one author achieved the ambition of publishing a drama and having it produced on the local stage.

**Central Provinces.**—The quantity and quality of the literary output of the provinces during 1912 were decidedly inferior, the aggregate number of publications falling from 176 in 1911 to 112. Of these, eight were in English, 34 in Marathi, and 33 in Hindi. There was no occasion to employ the machinery of the Press Act of 1910, and there was no political book published as such. There was, further, no religious tract which concealed under the guise of invocations and mythology political ideas as had been the case before and after the passing of the Act. The number of religious publications, 45, was high. About half as many educational works were published in 1912 as in 1911, 15 in all. Of the books selected for special review none were of any importance or educational value. *Satmat Prakash*, an anti-Brahman publication, may, however, be mentioned as it evidenced an anti-Brahman reaction amongst the lower-class Hindus in Berar. Another book, in Marathi, *Pradyumna Charitra*, by a member of the Servants of India Society, supported co-operative credit as the best means of removing the poverty and remedying the conditions of the Indian agriculturist.

(General.)

# CHAPTER XV.

## LOCAL SELF-GOVERNMENT.

GENERAL. | DISTRICT AND LOCAL BOARDS.
MUNICIPALITIES. | PORT TRUSTS.

## General.

Local self-government, municipal and rural, in its present form is essentially a product of British rule. Beginning in the Presidency towns, the principle made little progress until 1870, when it was expressly recognised by Lord Mayo's Government that "local interest, supervision, and care are necessary to success in the management of funds devoted to education, sanitation, medical charity, and local public works." The result was a gradual advance in local self-government, leading up to the action taken by Lord Ripon's Government in 1882–84, and to various provincial Acts passed about that time, which greatly altered the constitution, powers, and functions of municipal bodies—especially by widely extending the elective system—and which still form the basis of the provincial systems in force. At the same time, the resources and financial responsibility of municipalities were increased. Municipal committees now exist in most towns of any importance. In the rural districts local and district boards were established by Acts of 1883–5. The local boards are under the control of a general district board, or send delegates to a district council. The systems vary in different provinces, as a large discretion is left to the provincial governments. The elective principle has been adopted in varying degrees. There is also a smaller number of non-elective local bodies discharging similar duties in towns other than constituted municipalities and in cantonments. In the Punjab, United Provinces, Burma, Bombay, Central Provinces and Berar, and North-West Frontier Province certain provisions of the Municipal Acts are extended to small towns which are not fitted for the full responsibilities of municipal government, but nevertheless require organised measures for sanitation and other purposes. These, which are described as Notified Areas, must not be purely agricultural, and must not have a population exceeding 10,000. In the chief ports specially constituted boards or "trusts" have charge of harbour works, port approaches, and pilotage. Bombay and Calcutta also have "Improvement Trusts," distinct from the Municipal Corporations, for the purpose of clearing congested areas and making street improvements.

## Municipalities.

(*For further details see Statistical Abstract for British India, Tables* 101 *to* 103.)

**General.**—The municipal bodies exist, raise funds, and exercise powers under enactments which provide separately for the special requirements of each province and of the three Presidency capitals, Bombay, Calcutta, and Madras. In the municipalities as a whole rather more than a half of the members are elected by the townsfolk under legal rules; in every town some, and in a few minor towns all, of the members are appointed by the Government. In almost every municipal body one or more Government officials sit as members. The number of Indian and non-official members, however, in every province largely exceeds the number of Europeans and officials. The municipal bodies are subject to Government control in so far that, generally speaking, no new tax can be imposed, no loan can be raised, no work costing more than a prescribed sum can be undertaken, and no serious departure from the sanctioned budget for the year can be made, without the previous sanction of the Government; and no rules or byelaws can be enforced without similar sanction and full publication; but, in view of the recommendations of the Decentralization Committee the question of according municipalities a larger measure of independence has recently been under consideration.

There were 714 municipalities at the end of 1911–12 (the latest year for which full figures are available), containing within their limits about 17 million people, or 7 per cent. of the total population of British India. Generally speaking, the income of municipalities is small. Their aggregate income amounted to about £5 million, excluding loans, sales of securities, and other extraordinary receipts. About 40 per cent. of the total is provided by Calcutta, Bombay, Madras and Rangoon. Loans are incurred for water supply and drainage schemes, the cost of

(Municipalities.)

which is too large to be defrayed from ordinary revenues. Municipalities other than the above four get their loans chiefly but not entirely from Government. The sources of municipal revenue, apart from loans and Government contributions, fall mainly under the two heads, "Taxation" and "Municipal Property and Powers apart from Taxation." Of the taxes the most important are octroi duties, levied in the United Provinces, the Punjab, the North-West Frontier Province, the Central Provinces and Berar, and Bombay, and the tax on houses and lands, which holds the chief place in the other provinces, as well as in Bombay city, and also contributes a considerable share of the receipts in the provinces named above. These two taxes each yielded about one-fifth of the total income of municipalities in 1911–12. There are also water, conservancy and lighting rates, tolls on roads and ferries, taxes on animals and vehicles, and in some places a tax on professions and trades. Steps have been taken in some cases to abolish octroi and to substitute for it direct taxation. The other sources of income include cattle-pound receipts, rents of municipal property, such as markets and slaughter-houses (an important item in Burma), and fees of various kinds. The objects on which municipal funds are spent are, mainly, water supply, roads, hospitals, vaccination, conservancy, drainage, lighting, fairs and markets, and education.

The interest in municipal elections, and in municipal affairs generally, is not usually keen, save in a few cities and large towns; but, as education and knowledge advance, interest in the management of local affairs gradually increases. In most provinces municipal work is fairly well done, and municipal responsibilities are, on the whole, faithfully discharged, though occasional shortcomings and failures occur. The tendency of local bodies, especially in the smaller towns, is to be slow in imposing additional taxes, in adopting sanitary reforms, and in incurring new expenditure. Many members of municipal bodies are diligent in their attendance, whether at meetings for business or on benches for the decision of petty criminal cases.

The following table gives information as to the constitution of municipal committees, taxation, &c. in the chief provinces in 1912–13 (or 1911–12 where no later figures are available):—

| | Population within Municipal Limits. | Number of Municipalities. | Total Number of Members. | By Qualification. | | | By Employment. | | By Race. | | Incidence of Municipal Taxation per head. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ex-Officio. | Nominated. | Elected. | Officials. | Non-Officials. | Europeans. | Indians. | |
| | | | | | | | | | | | s. d. |
| *Presidency Towns.* | | | | | | | | | | | |
| *Calcutta | 896,067 | 1 | 50 | — | 25 | 25 | 5 | 45 | 21 | 29 | 12 9 |
| Bombay | 979,445 | 1 | 72 | — | 16 | 56 | 8 | 64 | 15 | 57 | 15 6 |
| *Madras | 518,660 | 1 | 36 | 1 | 15 | 20 | 4 | 32 | 12 | 24 | 4 6 |
| Rangoon | 293,316 | 1 | 25 | 1 | 5 | 19 | 3 | 22 | 13 | 12 | 13 5 |
| *District Municipalities.* | | | | | | | | | | | |
| *Bengal | 1,968,292 | 111 | 1,513 | 98 | 554 | 861 | 178 | 1,335 | 156 | 1,357 | 2 7 |
| *Bihar and Orissa | 1,170,530 | 54 | 776 | 94 | 274 | 408 | 134 | 642 | 132 | 644 | 1 5 |
| Assam | 117,880 | 16 | 167 | 33 | 74 | 60 | 45 | 122 | 39 | 128 | 2 2 |
| Bombay and Sind | 2,354,932 | 158 | 2,310 | 387 | 830 | 913 | 457 | 1,673 | 137 | 1,993 | 3 3 |
| Madras | 2,082,257 | 61 | 947 | 70 | 387 | 490 | 189 | 758 | 138 | 809 | 1 11 |
| *United Provinces | 3,014,806 | 87 | 1,185 | 192 | 93 | 900 | 195 | 990 | 142 | 1,043 | 2 4 |
| Punjab | 1,606,788 | 104 | 1,162 | 214 | 407 | 541 | 239 | 923 | 96 | 1,066 | 3 5 |
| N.W. Frontier Province. | 141,928 | 6 | 118 | 35 | 83 | — | 35 | 83 | 17 | 101 | 4 4 |
| Central Provinces and Berar. | 878,094 | 56 | 759 | 17 | 261 | 481 | 158 | 591 | 74 | 675 | 2 10 |
| Burma | 695,734 | 45 | 570 | 180 | 293 | 97 | 196 | 374 | 170 | 400 | 3 3 |

* Figures for 1911–12.

**Bengal.—Calcutta.**—The Calcutta Corporation consists, under the Act of 1899, of 25 elected commissioners and 25 appointed—four by the Bengal Chamber of Commerce, four by the Calcutta Trades' Association, two by the Port Commissioners, and 15 by the Local Government. There is a General Committee, with executive powers, consisting of the chairman and 12 members, who are selected from among the Commissioners. The year 1912–13 was one of varied activity in all departments of the municipality. Schemes were considered for the development of undeveloped

**(Municipalities.)**

building sites, the re-construction of the town hall, the re-organisation of the engineering, building, and health departments. The new water supply scheme is working well, as is the new lighting department. The valuation of the city has increased rapidly and now stands at £2,620,000. The transfer of the capital to Delhi does not seem likely to affect the valuation prejudicially. The financial position is satisfactory, the revenue for 1912–13 being £646,995, as against £608,510 in 1911–12. The expenditure was £643,072 as against £582,547, the increase being chiefly due to the new recurring charge of contribution to the Improvement Trust. In view of this and of the rise in grain prices the rates may shortly have to be raised. A loan was raised in the year of £226,667. The total debt of the municipality at the end of the year was £3,281,833. The Calcutta Municipal Loans Bill was passed after the end of the period under review.

The Calcutta Improvement Trust came into being in January 1912. Seventeen improvement schemes are now under the consideration of the Trust and the Corporation, the most important being the improvement of the area round Kalighat.

**Assam.**—There were 16 municipalities. The total revenue was £34,764, and the expenditure £32,752. There was a large expenditure on water supplies. Attendance at meetings shows an improvement, but there was little keenness shown at the four general elections held during the year.

**Bengal.**—During 1911–12 no new Municipalities were formed. The elective system was extended to three municipalities. Assessment was revised in 82 municipalities, and in 11 of these a considerable increase of revenue resulted. In 37 municipalities a rate on holdings is the principal form of taxation; in 70, a tax on persons; and in four both are in force. The total revenue for the year was £339,001. The large municipalities are, on the whole, progressive, but in the smaller ones ratepayers are inclined to be apathetic.

**Bihar and Orissa.**—During 1911–12 the elective system was extended to six municipalities. Out of 17 general elections held, only eight were contested. A tax on holdings was in force in 23 municipalities and on persons in 28. Assessments were revised in 30 municipalities. There was an unsatisfactory accumulation of arrears of collection. The revenue for the year was £144,897, and the expenditure £124,404, of which over 80 per cent. was on public health and convenience.

**United Provinces.**—Numerous changes in the working of municipalities have been introduced as a result of the report of the Decentralisation Commission and, in order to enable their recommendations to be carried out more completely, an amendment of the Municipal Act is under consideration. The total income of the municipalities was £592,300, of which £257,100 was from octroi, which is being abolished in many towns. Of the total ordinary expenditure of £590,500 (the largest on record) £115,100 was capital outlay on water supply and drainage. Proposals are under consideration to substitute a terminal tax for octroi in the large towns, but it seems inevitable that it will have to be accompanied with some form of direct taxation to enable the towns to maintain their efforts to improve their essential services. The number of non-official chairmen has been increased and the boards under them are working satisfactorily. An increasing interest is being shown in election procedure, the proportion of voters voting at contested elections reaching 55 per cent. of the electorate. A lady member was returned for the Mussooree Board.

**Punjab.**—The powers of self-government provided in the municipal Acts were granted more freely in the Punjab than elsewhere. Owing, however, to the unsatisfactory working, lack of equity in assessing taxation, and expensive machinery of the smaller municipalities which have insignificant incomes, many municipalities have been converted into notified areas and small notified areas have been abolished. This process continued in 1912–13, and at the end of the year there were 104 municipalities, besides 88 notified areas, in which cheapness and simplicity of administration are the chief requisites. Municipal elections are beginning to arouse more interest, though not always of the most desirable kind. From most districts it is reported that contests are usually fought out behind the scenes before the polling stage is reached. To have been even an unsuccessful candidate appears to be considered a distinction. The working of the committees is on the whole satisfactory. The problem of town-planning will have to be considered as some towns are developing suburbs. The total income

of the year amounted to £435,039, and the total expenditure to £376,359. Octroi accounts for about 60 per cent. of the total income. Steps are being taken, in some districts, to substitute for it a terminal tax.

**North-West Frontier Province.**—The income rose to £76,550 and the expenditure to £44,369, the former figure including Government grants of nearly £30,000 for sanitation and education. The elective system is not in force in this province, and members are nominated for three years.

**Burma.—Rangoon.**—The ordinary revenue of the Rangoon municipality rose to £277,432, and the expenditure to £261,261. Apart from normal growth, the increase in the former case was due principally to the enhancement of assessments, and in the latter case to the purchase of land for new municipal offices, pumping and conservancy works, and road-metalling. The outstanding loans at the end of the year rose to £1,324,500, including the reclamation works loans of £403,300. The new roads department has made a good start; designs have been invited for the new municipal offices. Polling at the municipal elections was exceptionally heavy.

**Interior of Burma.**—Elected members sat on 11 committees. There were very few contests at elections except at Mandalay. The ordinary income amounted to £292,524, and the expenditure to £261,716. There were large arrears of taxation at the end of the year. In view of the establishment of a provincial sanitary service, arrangements are being made for the training of sanitary inspectors in Rangoon. The average attendance at meetings showed an improvement.

**Central Provinces and Berar.**—The elective principle is in force in all but seven of the 56 municipalities. The interest taken in elections was, in many cases, stimulated by the fact that the election for the new Legislative Council will be based in part on the results of the municipal elections. The total income of the municipalities was £215,090. Over 60 per cent. of the revenue from rates and taxes in the Central Provinces was derived from octroi, which, however, is not levied in Berar. The abolition of this form of taxation has been suggested, but is not, it is thought, at present called for. A terminal tax, however, is being, in some cases, tried as a substitute. Other sources of income included a sanitary grant from Government of £27,000. The expenditure amounted to £203,384, an increase over 1911–12, chiefly under the heads of water supply and roads. The total indebtedness of the municipalities to Government was £145,148, over two-thirds of which was owed by Nagpur and Jubbulpore. The financial position of the borrowing municipalities is sound.

**Madras.—Madras City.**—The principal taxes are a graduated tax on trades and professions, a tax of 10 per cent. on the annual value of buildings and lands, a water and drainage tax, and a lighting tax levied on the same basis, besides taxes on animals and vehicles, &c. The receipts (including opening balances) for 1912–13 were £421,542, and charges £272,057. The former figure includes a special grant from Government of £123,333 for water supply and drainage. Among public buildings, the new corporation offices are making progress.

**Interior of Madras.**—In 58 of the 61 councils the elective system is in force, and the total number of elected members now exceeds that of non-elected. Two more councils elected a chairman than in 1911–12, and at the end of the year 46 chairmen were non-officials. Receipts rose from £405,846 to £486,755, chiefly owing to increased grants from Government. Expenditure rose from £363,361 to £404,800. The orders of the Government of India on the recommendations of the Royal Commission on Decentralisation were received after the close of the year.

**Bombay.—Bombay City.**—Bombay City is administered by a corporation of 72 councillors, of whom 16 are nominated by the Government, 36 are elected by the ratepayers, 16 by the justices, 2 by the Chamber of Commerce, and 2 by the University. The ordinary income in 1912–13 was £849,439, and the expenditure £778,772. There was a rise in income due to the revision of assessments and the construction of new buildings. There was an unduly large amount of lapsed grants, due to over-estimation of requirements by various departments. A grant of £6,667 has been voted as a contribution towards the "Gate of India" scheme for commemorating the royal visit. The apprehension, felt in recent years, that expenditure might be expanding faster than normal revenue, has now been laid;

(Municipalities.)

the permanent expansion of the latter being, it is calculated, considerably above that of the former. Rates of taxation continued the same during the year. At the end of the year the outstanding debt was £3,936,128, and the invested sinking fund £842,659. The expenditure on loan works amounted to £119,195. The expenditure on plague preventive measures from the outbreak of the epidemic in 1896, to the end of March 1913, amounted to £514,814, of which £96,700 was received from the Government, and the remainder met partly from loans and partly from municipal revenues.

The City of Bombay Improvement Act was amended in January 1913 with the object of simplifying the financial arrangements between the Government, the Municipality, and the Trust, and making them more favourable to the two latter. The total area acquired by the Trust was 265,910 square yards: the task of acquisition was delayed by a number of difficult cases. The capital expenditure was £149,000. A loan of £166,667 was raised in Bombay.

**Interior of Bombay.**—During 1908–9, with the object of quickening interest in local affairs, Government relaxed its control by empowering 87 municipalities not specially excepted to select non-official presidents and by conceding to five city municipalities the privilege of electing two-thirds of the number of their councillors on their agreeing to appoint a Government servant as chief officer of the executive. During 1912–13 the latter privilege was granted to the Bijapur Municipality, while the Sukkur Municipality was given the privilege of electing its president. This policy of extending the powers of local bodies is safeguarded by strict measures when such powers are abused. The Kaira Municipality was reconstituted after suspension, but those of Rajapur and Ahmedabad remained suspended. The aggregate income was £586,054 and expenditure to £796,242—in each case showing considerable increase, due to Government grants for education and sanitation and a corresponding expenditure under these heads.

## District and Local Boards.

(*For further details see Statistical Abstract for British India Table* 104.)

**General.**—In rural areas district and local boards perform the duties assigned to municipalities in urban areas. In each district, generally speaking, there is a board, subordinate to which are two or more local boards. In Madras the Union Committee or Panchayat is again subordinate to the Local Board. In 1912–13 there were 393 of these with 3,722 members. There are some Union Committees also in Bengal. The boards contain a varying proportion of elected members. Elected members form a large majority on the boards in the United Provinces and the Central Provinces and Berar. On all boards the great majority of members are Indians. The total number of district boards in 1911–12 was 198, and of local boards 533. There are no boards in Burma and no Local Boards in the United Provinces and the N.W. Frontier Province. The following table shows the general constitution of the boards in each province, the figures in italics relating to local boards, the others to district boards :—

(*Figures for* 1912–13 *save where otherwise stated*).

| Province. | Number of Boards. | Total Number of Members. | By Appointment. | | | By Employment. | | By Race. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Ex-officio. | Nominated. | Elected. | Officials. | Non-Officials. | Europeans. | Indians. |
| Madras | 25 | 760 | 124 | 290 | 356 | 297 | 473 | 124 | 646 |
| | *95* | *1,595* | *97* | *931* | *567* | *382* | *1,213* | *66* | *1,529* |
| *Bombay | 25 | 779 | 71 | 391 | 317 | 169 | 610 | 51 | 728 |
| | *212* | | | | | | | | |
| Assam | *19* | *316* | *76* | *60* | *180* | *81* | *235* | *134* | *182* |
| *Bengal | 25 | 509 | 134 | 166 | 207 | 164 | 345 | 93 | 416 |
| | *71* | *843* | *49* | *437* | *357* | *100* | *743* | *38* | *805* |
| *Bihar and Orissa | 18 | 391 | 107 | 135 | 149 | 128 | 263 | 142 | 249 |
| | *40* | *489* | *53* | *380* | *56* | *76* | *413* | *71* | *418* |
| United Provinces | 48 | 895 | 3 | 279 | 613 | 247 | 648 | 97 | 798 |
| Punjab | 28 | 1,101 | 245 | 473 | 383 | 258 | 843 | 73 | 1,028 |
| | *17* | *314* | *18* | *106* | *190* | *18* | *296* | *1* | *313* |
| N.-W. Frontier Province | 5 | 218 | 51 | 167 | — | 51 | 167 | 26 | 192 |
| Central Provinces and Berar | 21 | 1,849 | 27 | 498 | 1,324 | 218 | 1,629 | 24 | 1,823 |
| | *79* | | | | | | | | |

* Figures for 1911–12.

**(District and Local Boards.)**

The funds of district and local boards are largely derived from rates or cesses levied upon agricultural land over and above the land revenue. In addition, Government makes grants in aid to all boards, and in 1912–13 specially large grants were made from the special sums devoted in that year to education and sanitation. At the close of the year, Government further announced their intention of making assignments to the Provincial Governments to enable them to forego certain amounts which had hitherto been appropriated for provincial use from the cess on land. This has the effect of a further subsidy from Imperial funds towards local boards amounting to £530,000. The boards have also other sources of income, such as cattle pound receipts (except in Madras), educational receipts, medical receipts, tolls from ferries and bridges, and contributions for specific purposes from the provincial funds. Their aggregate income (excluding debt items) in 1911–12 was about £3,434,900. The expenditure of the boards is chiefly for roads and bridges, hospitals, vaccination, conservancy, drainage, water supply, primary education, markets, and resthouses.

**Assam.**—The number of meetings held and the attendance of members show an improvement. Income rose to £151,541, of which more than half consisted of Government grants.

**Bengal.**—During 1911–12 there were signs of satisfactory progress, and of increasing keenness on the part of members of the boards, who are generally alive to the advantages of education and sanitation, but there is a lack of systematic preparation of schemes. General elections were held in 12 districts and generally completed. The recommendations of the Decentralisation Commission were considered by the Local Government and their views submitted to the Government of India. The total income was £400,136, and the expenditure £405,237. Six district boards had proposals for the construction of light railways, and one of these schemes was in progress at the end of the year. The accumulation of large balances at the end of the year remains a blot on district board administration.

**Bihar and Orissa.**—In 1911–12 attendance at meetings improved, but was still far from good. The elective system for Local Boards was extended. One general election was held for local boards. The income was £285,507 and expenditure £282,776; the figures show little change from 1910–11. Here, as in Bengal, the closing balance in several districts was unduly high. There were three light railways guaranteed by district boards, and the construction of others is under consideration.

**United Provinces.**—The assignment promised by Government as mentioned above will have the effect of increasing the incomes of the district boards by nearly 40 per cent., and greatly enhanced activity is anticipated, especially in the direction of public works and primary education. The process of decentralizing the work of district boards proceeds apace; work is decentralized in some cases by locality and in others by departments. The total income was £536,091, and the expenditure £520,587. The balances in hand show a continued increase. A large additional grant for education (£31,097) was chiefly spent on providing extra teachers and training classes and on new boys' schools.

**Punjab.**—There is still a lack of interest in elections to district boards, though the privilege of voting for members of the Provincial Legislative Council is likely to have a stimulating effect. The working of the boards continues to show an improvement, and the growth of local board resources of recent years owing to liberality on the part of Government and the raising of rates has resulted in a keener interest being taken in the majority of districts. Some boards are trying interesting experiments in the way of industrial schools, &c. An experimental farm started by the Lyallpur Board, had, however, to be closed. The income of the boards rose from £358,262 to £429,804—principally owing to large grants from Government.

**North-West Frontier Province.**—There is no elective system in this province. The working of the district boards were on the whole satisfactory. The aggregate income of the boards was £36,329 and their expenditure £31,170. Sub-committees have been appointed, and members of boards are allotted circles of their district for supervision.

(District and Local Boards.)

**Central Provinces and Berar.**—The attendance of members is improving, and some districts are beginning to show a keenness in elections. Government contributions rose by £7,000 owing chiefly to grants for schools, but the district bodies could not in all cases work fully up to their estimates. The system of delegating work from district to taluk boards, which was started in the Central Provinces in 1910–11, is being introduced in Berar. Income was £191,410 and expenditure £178,483.

**Madras.**—One-half of the members of the district boards are, as a rule, elected by the taluk boards. In 1909 the elective system was introduced for taluk boards, but of the 258 seats thrown open to election during 1912–13 only 57 were contested, and in 35 cases Government nominations became necessary for lack of candidates. Unofficial presidents have been nominated or elected in several taluk boards. The village union *panchayats* or councils have each not less than five members; they deal chiefly with sanitation, and the making and repair of roads, and in some cases they have the management of choultries, markets, and other local institutions entrusted to them by the taluk boards. On the whole the working of the local bodies was satisfactory. The income of the boards and unions, excluding debt heads and contributions from one district board to another, amounted to £1,135,038, and the expenditure to £983,702. The Tanjore and Kistna District Boards railways yielded net profits of 7·9 and 8·3 per cent. respectively on the capital outlay. A special railway cess for railway construction is levied in nine districts.

**Bombay.**—The elective system is in force in most taluk boards, as well as in the district boards. The average attendance of members at meetings of the boards did not alter greatly. The income of all boards in 1912–13 was £507,972—showing a rise due to recovery of arrears of cess after suspensions in 1911–12, and to larger grants in aid. The total expenditure of the boards rose to £521,885. A board was constituted for the new district of Nawabshah at the close of the year.

**Burma.**—There are no local boards in Burma. Their place is taken by District Funds in Upper Burma and District Cess Funds in Lower Burma, which are administered by the Deputy Commissioners of the districts. These funds had an aggregate income of about £247,600 and an expenditure of about £223,300 in 1912–13. Those in Lower Burma, have the largest resources, as they include the proceeds of a 10 per cent. cess on the land revenue, and account for £176,300 of the expenditure, which was chiefly on education and public works.

## Port Trusts.

(*For further details see Statistical Abstract for British India, Table* 186.)

**General.**—The administration of the larger ports is placed by various Acts in the hands of Port Commissioners, who are charged with the provision of suitable dock accommodation and other services necessary to shipping. They have wide powers, but are more subject than municipal bodies to Government control. Members of these Port Trusts, which include both Europeans and Indians, are for the most part appointed by the Local Governments, and are largely representative of the local commercial communities. Except in Calcutta the elected members are fewer than the nominated members. Port trustees are empowered, subject to the control of the Government, to levy dues on shipping and goods, to charge fees for services rendered, to contract loans for port improvements, to maintain the harbour and its approaches, and to erect warehouses, jetties, harbour lights, and docks for the convenience of traders and shipping. The chief ports, in which is carried on by far the largest part of the trade of India, are alone dealt with here. There are smaller ports, especially in Madras and Burma, where sums are raised yearly for expenditure on improvements.

**Calcutta.**—The income of the Port Trust for 1912–13 (£949,754) beat the record figure of the previous year by over £40,000. The expenditure was £980,021. The deficit (which, after adjustment, works out at about £20,000) is due to debt charges consequent on the construction of capital works. As a still heavier programme of construction in the near future is considered necessary, an increase of tolls and rates appears unavoidable. The traffic at the jetties increases so fast that neither the construction of new berths nor the improvement of arrangements has sufficed to

relieve the congestion, and a Committee has been appointed to deal with the whole subject of the Port of Calcutta and its approaches. The capital debt of the Trust at the close of the year was £5,828,086. Debentures were issued during the year for £333,000. Among works in progress are the construction of new berths in the docks, of an additional jetty, extension of railway facilities and of shed accommodation, provision of dredgers and ferry steamers, and the lighting of the lower reaches of the river. The plans for the extensions at the docks are maturing, a general scheme having been made for the lay-out of the property with the new dock junction and railway connections.

**Bombay.**—Here again the revenue of the Port Trust reached a record figure of £592,538. The expenditure on capital account was £653,111, the greater part being spent on the Alexandra and Hughes Docks and the Mazagon–Sewri reclamation. Four per cent. debentures were issued during the year for £733,000 and the debt of the Trust amounted at the end of the year to £8,111,152, of which £2,010,106 is due to Government, while the remainder consists of foreshore securities and debenture loans. A railway yard is being constructed at Wadala. The pumping for the Mazagon–Sewri reclamation scheme has been completed and surfacing has commenced. It has been found necessary, in view of extraordinary expenditure in recent years, to levy a surtax of 10 per cent. on pilot fees.

**Karachi.**—The revenue for 1912–13 (£305,740) shows a rise of 50 per cent. in five years. The expenditure (£251,337) also rose, largely owing to the increased cost of labour, &c. The new import yard was opened on 1st April 1913. Expenditure on works amounted to £115,671. A loan of £200,000 was raised during the year, and the capital debt at the close amounted to £1,497,561. The plans and estimates for the west wharfage had not been completed by the end of the year.

**Rangoon.**—Receipts were £292,897 and expenditure £239,720; the former show an increase due to expansion of trade and to an increase of the river rate from 4 to 6 annas a ton; the latter has also increased owing to increased cost of living. The question of the financial position of the port has given rise to some apprehension in the past, but it is now considered satisfactory. Schedule rates have been revised for use of wharves, moorings, &c. Debentures for £60,000 were raised during the year, and the debt (after deducting the amount at the credit of the Sinking Fund) was £1,591,404. The river-training works have been pushed forward with great rapidity; up to the end of the year £742,427 had been spent out of a sanctioned estimate of £1,000,000. The question of a deep-water channel over the Hastings Shoal received serious attention. Further observations are necessary before deciding which of the various channels shall be selected; in the meantime a dredger has been ordered.

**Madras.**—Receipts amounted to £84,345 and expenditure to £55,553. The expenditure was thus 66 per cent. of the revenue. A loan of £333,000 has been sanctioned, chiefly with a view to deepening the harbour and running a quay along its western side. Five hundred feet of the latter had been completed by the end of the year. A new coal yard is being made and a scheme for reducing the number of level crossings has been proposed.

# CHAPTER XVI.

## CONDITION OF THE PEOPLE.

VITAL STATISTICS.
PLAGUE.
SANITATION.
HOSPITALS, DISPENSARIES, AND ASYLUMS.
EMIGRATION AND MIGRATION.
PRICES.
WAGES.
FAMINE OR SCARCITY.
GENERAL REMARKS.

## Vital Statistics.

*(Detailed information on Vital Statistics, Sanitation, &c. is contained in the annual Report on Sanitary Measures in India, which is published as a Parliamentary Paper, and in the Statistical Abstract for British India, Tables* 103–4 *and* 198 *and* 199.)

**General Population. Registration.**—The statistics given below are based on the 1911 census figures. Although improvement in registration is being steadily effected, there are still serious defects in some areas. The facts are nearly everywhere collected by an illiterate agency (usually by village watchmen in rural areas), and accurate figures, especially of the causes of death, are unobtainable. It is more difficult, especially in towns, to obtain information about births than about deaths. The actuarial reviews of the returns of the censuses of 1881 to 1901 show that the registered birth and death rates are understated, and, as registration improves, the registered rates must tend to approximate to the calculated rates. The high Indian birth-rate is due, not to exceptional fertility, but to the large proportion of married women. The high infantile death-rate is partly due to the weakness of the children of immature and ignorant parents and faulty midwifery, but to some extent it is only apparent, being calculated on imperfect returns of births.

**Birth and Death Rates.**—The population of the areas in which births and deaths were registered was 238,661,346, according to the census of 1911, and the number of births registered in 1912 was 9,295,296 (= 38·95 per mille, compared with 38·58 per mille in 1911, and an average of 38·04 per mille in the five years 1907–11). The total number of deaths was 7,090,991 = 29·71 per mille, as compared with 32 per mille in 1911 and 34·28 for the five years 1907–11. This was the lowest rate since 1901. The rates for the provinces are given in the following table :—

| — | Birth Rates. | | Death Rates. | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1911. | | | 1912. | | |
| | 1911. | 1912. | Rural. | Urban. | Total. | Rural. | Urban. | Total. |
| Bengal | 35·0 | 35·3 | — | — | 26·9 | 30·1 | 24·5 | 29·8 |
| Bihar and Orissa | 42·9 | 42·5 | — | — | 35·1 | 31·0 | 30·0 | 31·0 |
| Assam | 32·0 | 32·2 | — | — | 23·6 | 25·0 | 20·8 | 25·0 |
| United Provinces | 43·8 | 45·4 | 44·2 | 56·0 | 45·0 | 29·6 | 34·4 | 29·9 |
| Punjab | 43·9 | 45·3 | 33·4 | 39·7 | 34·0 | 26·1 | 31·9 | 26·6 |
| N.W. Frontier Province | 35·1 | 37·1 | 23·1 | 25·0 | 23·3 | 23·5 | 22·7 | 23·4 |
| Central Provinces and Berar | 49·5 | 48·2 | 33·7 | 44·9 | 34·7 | 41·8 | 47·6 | 42·3 |
| Lower Burma | 31·4 | 31·7 | 22·2 | 36·4 | 24·0 | 24·4 | 37·2 | 26·0 |
| Upper Burma | 34·8 | 33·0 | 24·9 | 50·2 | 27·1 | 27·5 | 44·0 | 29·0 |
| Madras | 30·4 | 30·9 | 22·4 | 28·2 | 23·1 | 23·8 | 28·6 | 24·3 |
| Bombay | 36·0 | 35·0 | 27·0 | 36·9 | 28·3 | 33·8 | 41·5 | 34·9 |
| Minor Areas | 40·6 | 43·8 | — | — | 41·2 | — | — | 38·3 |
| Total | 38·6 | 38·95 | 31·6 | 36·2 | 32·0 | 29·4 | 33·1 | 29·7 |

The most striking feature was the increased birth-rate and diminished death-rate in the United Provinces and the Punjab due to comparative freedom from malaria and plague, and to recuperation from the epidemics of previous years. In the Central

Provinces, on the other hand, cholera and malaria prevailed, and the birth-rate (though still the highest of any province) diminished and the death-rate increased. Cholera in Bombay and malaria in Burma produced similar results.

The excess of births over deaths ranged from 19 per mille in the Punjab to ·1 per mille in Bombay. The mean percentage of male to female births ranged from 123 in the North-West Frontier Province to 104 in Bihar and Orissa.

The greatest mortality occurred in December, while the lowest was in February. Infantile mortality was highest in the Central Provinces, Burma, Bombay, and Bengal; the total rate per mille for all India was 216 male and 199 female; strenuous efforts are being made to reduce these excessively high figures.

The following table gives the ratio of deaths per mille in cities of British India whose population exceeded 150,000 in 1911 :—

| — | Mean Rate. | | — | Mean Rate. | | — | Mean Rate. | |
|---|---|---|---|---|---|---|---|---|
| | 1907–11. | 1912. | | 1907–11. | 1912. | | 1907–11. | 1912. |
| Calcutta - - | 30·5 | 28·1 | Howrah - | 30·9 | 25·2 | Agra - - | 31·3 | 20·3 |
| Bombay - - | 37·4 | 40·0 | Benares - | 59·7 | 53·3 | Ahmedabad - | 52·0 | 64·9 |
| Madras - - | 41·2 | 38·0 | Delhi - - | 60·0* | 43·7 | Allahabad - | 25·4 | 19·4 |
| Lucknow - - | 56·1 | 31·4 | Lahore - - | 38·7 | 28·5 | Amritsar - | 53·4 | 38·3 |
| Rangoon - - | 40·2 | 35·3 | Cawnpore - | 56·8 | 36·0. | | | |

* Rate for 1911.

**Chief Diseases.**—There are three main classes of fatal disease: specific fevers, diseases affecting the abdominal organs, and lung diseases. Intestinal and skin parasites, ulcers and other indications of scurvy widely prevail. Much of the sickness and mortality is due to deficient powers of resistance and to insanitary habits and surroundings. The table below shows the number of deaths from each of the principal diseases recorded in British India and the death-rates per 1,000, during the

| Years. | Cholera. | Small-pox. | Fevers. | Dysentery and Diarrhœa. | Plague. | Respiratory Diseases. |
|---|---|---|---|---|---|---|
| 1910 - - - - | 430,451 | 51,315 | 4,341,392 | 267,672 | 413,355 | 234,308 |
| | 1·90 | 0·23 | 19·17 | 1·18 | 1·83 | 1·03 |
| 1911 - - - - | 354,005 | 58,535 | 4,207,356 | 253,636 | 733,582 | 223,822 |
| | 1·48 | 0·25 | 17·63 | 1·06 | 3·07 | 0·94 |
| 1912 - - - - | 407,769 | 89,357 | 3,936,085 | 292,216 | 263,037 | 247,736 |
| | 1·71 | 0·37 | 16·49 | 1·22 | 1·10 | 1·04 |

three years from 1910 to 1912. With regard to special diseases, no province escaped the visitation of cholera, which was chiefly prevalent in Bombay and the Central Provinces. Small-pox showed an increase. Plague forms the subject of a separate section. When reference is made to "fever" in India, malarial fever is generally understood, but many causes of death and many diseases much more fatal than malarial fever are included under the heading. The fever death-rates, as usual, varied greatly, ranging from 21·2 in Bengal to 7·6 in Madras. Northern India generally suffered far less than in previous years. As a result of the Simla Malaria Conference of 1909 a permanent committee was set up with a central bureau at Kasauli and a laboratory at Amritsar, and provincial committees have been formed in the different provinces to carry out the policy recommended at the Conference. The third meeting of the General Malaria Committee was held at Madras in November 1912. Since then, the committee having become a sub-committee working under the Scientific Advisory Board of the Indian Research Fund, the meetings have been merged with the All-India Sanitary Conference, and the committee's journal *Paludism* has been incorporated with the new Indian Journal of Medical Research. During 1912 special malaria officers were appointed in Madras, Bengal, the United Provinces, the Central Provinces, the Punjab and Burma. There are now nine special malaria officers occupied on enquiries in seven provinces. The

malaria classes are now held at Delhi; in 1912, 57 medical officers were trained at these classes, including 30 in military employ, and the classes are being further enlarged. The measures adopted to fight malaria are the sale of quinine at cheap rates and the extirpation of mosquitos by such methods as drainage, petrolage and jungle clearing. Recent experience has shown the undesirability of expending money on extirpation without a preliminary survey of the district, and such surveys are being carried out accordingly in malarious districts in all parts of India. Special operations have been undertaken in Saharanpur, Nagina, Kosi, Ennore, Palwal, the Delhi *Enclave* and Meerut. The vigorous anti-malaria campaign in Bombay Town is still proceeding.

**Vaccination.**—The total number of vaccinations performed among the civil population during 1912–13 was 9,919,723, being a slight increase on the previous year's work. Of primary vaccinations 96·54 per cent., and of re-vaccinations 70·57 per cent., were successful: about 36·49 per mille of the population were successfully vaccinated. The number of infants successfully vaccinated was 46·19 per cent. of the number born.

## Plague.

The present epidemic of plague in India first broke out at Bombay in August 1896, and, as the marginal table shows, it has been responsible for a heavy rate of mortality since that date. In 1907 the deaths from plague attained the highest total yet recorded, viz., 1,315,892, for India as a whole, the number in British India alone being 1,166,223, or 5·16 per mille. In 1908 the mortality declined enormously, falling to 156,480, the lowest total since 1900. In 1909 there was once more a relatively low mortality, viz., 178,808 deaths, or fewer than in any year since 1900, excepting 1908. In 1910 and 1911 there was a severe recrudescence, especially in Bengal, the United Provinces, and the Punjab. In the latter part of 1911 and in 1912 the virulence of the epidemic abated, and the 1913 figures show a still further fall. Towards the end of that year, and in the early months of 1914, there has been a rise, owing to a recrudescence of the disease in Bombay.

| | |
|---|---|
| 1896–97 | 57,543 |
| 1898 | 116,285 |
| 1899 | 139,009 |
| 1900 | 92,807 |
| 1901 | 282,027 |
| 1902 | 576,365 |
| 1903 | 883,076 |
| 1904 | 1,143,993 |
| 1905 | 1,069,140 |
| 1906 | 356,721 |
| 1907 | 1,315,892 |
| 1908 | 156,480 |
| 1909 | 178,808 |
| 1910 | 512,605 |
| 1911 | 846,873 |
| 1912 | 306,488 |
| 1913 | 217,145* |

* Preliminary figure.

Plague is so local in its visitations that all general and unanalysed statistics are likely to prove misleading. Many parts of India have been almost entirely free from its ravages, and in the greater part of the country the outbreaks cannot be described as having been severe or disastrous. On the other hand, general statistics tend to conceal the severity of the distress caused by the disease in particular districts. In some parts of the Punjab and the United Provinces the mortality has been specially severe.

The reasons for this uneven incidence are at present under investigation. The mortality in Eastern Bengal and in Assam has been at no time appreciable, largely, it is believed, because the habits of the people and the structure of their houses are unfavourable to the breeding of rats, while in the Madras Presidency and in Burma the epidemic has never reached serious dimensions. How far the comparative immunity of Madras is due to a policy of segregation and surveillance, and how far to climatic conditions is undecided.

The efforts of Government to discover and apply the most effective methods of remedial action have not been relaxed. The Advisory Committee on Plague Investigation in England and the Plague Commission in India, whose constitution has been described in former issues of this Report, have continued their investigations, which have already led to most important results. The main facts in regard to the mode of propagation of an epidemic and the life history of the plague bacillus have been ascertained, and rational methods of attack have thus been made possible. A popular summary of the principal conclusions arrived at was given in "The Etiology and Epidemiology of Plague" (price 5*d.*), published early in 1908. It is now generally agreed: (1) That epidemic bubonic plague in man is directly dependent on epidemic plague in rats; (2) that the vehicle of contagion between rat and rat and between rat and man is the plague-infected rat-flea; (3) that bubonic plague is not directly infectious from man to man; and (4) that the life of the plague bacillus outside the

bodies of men, animals, or fleas is of short duration. In large towns plague may persist through the year, but in villages such persistence is exceptional, and the recurrence of an epidemic is probably due to fresh infection.

In the light of the knowledge and experience now acquired it is possible to deal satisfactorily with the disease when effective control can be established over the sanitary conditions; and in the case of the native army and in limited areas such as jails there has been remarkable success. But attempts to establish such control over large areas would involve too great an interference with the habits, prejudices, and sentiments of the people, and the application of measures of proved utility must depend upon the particular circumstances of each locality and upon the character of its inhabitants. In the face of great practical obstacles, three principal measures for combating plague are now adopted:—

(1) The temporary evacuation of quarters in which plague is prevalent. This has proved to be the most effective way of removing man from contact with infected rat-fleas. Government is ready to supply money and material to provide temporary dwellings and to alleviate the discomfort and distress which must accompany evacuation of quarters, a matter, of course, in which no pressure can be exerted, and in regard to which the wishes and even the prejudices of the people must be consulted.

(2) Inoculation with the prophylactic fluid. The efficacy of this remedy on the occasion of an outbreak has been placed beyond doubt; it is freely resorted to, and encounters little popular prejudice, when the presence of plague is felt; but as a general or permanent remedy it is obviously of limited utility.

(3) The systematic destruction of rats (for which purpose smoking has been found an admirable method, as it kills the fleas as well as the rat), the diminution of the food supply to which they have access, and, in the course of time, such improvement in the structure of houses as shall render them reasonably rat-proof.

An account of the various Research institutions appears in Chapter XIII.

## Sanitation.

**General.**—The Second All-India Sanitary Conference was held at Madras in November 1912, and the third at Lucknow in January 1914. The reorganisation and enlargement of the Sanitary Department proceeds apace: 12 appointments of Deputy Sanitary Commissioners have been sanctioned since the commencement of 1912, besides 143 Health Officers for Municipalities, half of whose pay will be defrayed by the State. The Sanitary Engineering Staff of several provinces is to be increased, as is also the staff of the Bacteriological Department. Large special grants have been made to Provincial Governments during recent years for expenditure on sanitation. The following paragraphs give some account of the chief sanitary works undertaken in the various provinces in 1912:—

**Bengal.**—In Calcutta the scheme for the supply of filtered water has now been in operation for two years: the average daily supply in March 1913 was 35⅓ million gallons. Extra pumping apparatus has had to be provided in view of the enormous demand. Several outside municipalities receive their water supply from Calcutta. The waterworks administration of the town has been centralised, and steps are contemplated to reduce the waste of water which undoubtedly occurs. The surface drainage of the streets during monsoon time present difficulties which are receiving attention. The construction of sewers in the "Fringe Area" progresses. The completion of the Manicktollah pumping station was retarded owing to an accident. The Calcutta Improvement Act came into force in January 1912, and eighteen schemes have been under consideration by the Trust and the Corporation.

Outside Calcutta, drainage schemes of more or less importance were in progress in 10 municipalities, and were in various stages of preparation in about 20 others. In eight municipalities waterwork schemes were in progress. A large scheme for extending the Howrah waterworks has been sanctioned, and several other municipalities will draw filtered water from the Howrah mains. A grant of £48,000 was distributed for sanitary improvements, and the total amount spent in the province on sanitary works amounted to over £80,000.

**(Sanitation.)**

**Bihar and Orissa.**—The most important works in progress are the drainage and waterworks of Gaya, Puri (a town of special importance both as a pilgrimage centre and a popular seaside resort), and Monghyr. Similar schemes are under preparation for Patna and Bankipur. Municipalities and district boards spent during the year about £70,000 on sanitation.

**Assam.**—The principal works in progress were waterworks for Shillong (completed during the year) and Jorhat. Schemes are under consideration for Silchar and elsewhere.

**United Provinces.**—The principal schemes in progress include the opening up of certain congested areas in Lucknow, extensive drainage projects in that town and in Allahabad, and the extension of the Cawnpore water-supply system. 36 per cent. of the total municipal income of 1911–12 was spent on conservancy, water-supply, and drainage. The eight large waterworks in the province worked on the whole satisfactorily, but demand was everywhere in excess of supply.

**Punjab.**—The most important scheme under construction was a water-supply extension scheme at Simla. The sanitary scheme of the new Viceregal Lodge at Delhi was carried out by the Punjab Public Works Department. Underground drainage schemes have been sanctioned for Amritsar and Lahore. Rewards for sanitation in the Chenab Colony have been discontinued.

**North-west Frontier Province.**—During 1912 several small schemes for water-supply, drainage, paving, and road improvement were inaugurated, and grants amounting to £13,000 have been allotted for 1913–14, chiefly for schemes in Kohat, Bannu, and Dera Ismail Khan.

**Central Provinces.**—The principal part of the Nagpur Waterworks extension scheme has been completed; the waterworks ran short in several municipalities and water had to be pumped from wells. There are proposals in hand for new or supplementary schemes in nine towns. Surface drainage schemes are in progress at Wardha and Khamgaon. Large sewage schemes have been prepared for Jubbulpore and Burhanpur. Attention is being paid to the raising of the standard of conservancy and the improvement of byelaws and their observance.

**Burma.**—Municipal expenditure on sanitation in 1911–12 was 37·5 per cent. of the income of municipalities. Water-supply schemes at Pegu, Bassein and Monywa, and drainage schemes at Toungoo, Henzada and Thongwà were completed or in progress. A 6-lakh grant from the Imperial Government was made for building a bacteriological institute, rebuilding certain bazaars, and the Pegu waterwork scheme. The Mandalay water-supply scheme is reported to be in abeyance owing to difficulty in financing it, but the drainage scheme at that town progresses satisfactorily.

**Madras.**—In Madras City a general drainage scheme estimated to cost £555,000 is under consideration; a general water-supply scheme was sanctioned in 1911, and considerable progress was made on it in 1912. Much was also done in the way of acquiring land for street widening with a view to relief of congestion. A special grant of £123,000 was made by Government for water supply and drainage.

There are now 21 towns in Madras with piped water supply. New water-supply schemes are under execution in five others and under investigation in 25. There has been a marked improvement in conservancy arrangements. Sewage farming is being adopted in an increasing number of municipalities, but, in most cases, the methods employed are crude. Ootacamund is the only town at present (except Madras) with a sewage scheme in working order, but in 28 other towns schemes are under investigation.

**Bombay.**—In Bombay town, schemes have been submitted for sewerage of the north of the island and of the Elphinstone reclamation district. The new pumping engines at Love Grove are almost completed. Work is in progress for improving the water supply from Tansa lake. Good progress was made with several of the Improvement Trust schemes.

In the Mofussil the municipalities spent 28 per cent. of their income on sanitation. There are 45 water supply and drainage projects either in progress or under consideration. Grants amounting to £100,000 were made from Provincial and Imperial revenues. In many municipalities money is being spent on opening up congested areas.

Vessels for the Red Sea pilgrim traffic were cleansed and freed from rats under the direction of the Bombay Port Health Officer. The out-going pilgrims, who numbered 16,024, were medically inspected and their clothing and bedding thoroughly disinfected before embarkation. 10,587 voluntarily underwent vaccination.

## Hospitals, Dispensaries, Asylums, &c.

The following table gives figures for Indian hospitals under three heads. The institutions grouped under Heads (1) and (3) are, generally speaking, for the general public. Those under Head (2) are for special classes of persons, such as railway servants, policemen, &c.:—

| | (1) Civil Hospitals and Dispensaries (State Public, Local Fund and Private-aided). | | | (2) State Special and Railway Hospitals. | | | (3) Private Non-aided Institutions. | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. of Institutions. | No. of In-patients. | No. of Out-patients. | No. of Institutions. | No. of In-patients. | No. of Out-patients. | No. of Institutions. | No. of In-patients. | No. of Out-patients. |
| 1911 - | 2,707 | 460,671 | 27,595,176 | 829 | 89,347 | 2,030,098 | 706 | 48,796 | 4,712,616 |
| 1912 - | 2,733 | 492,798 | 28,956,763 | 826 | 93,350 | 2,154,284 | 669 | 51,799 | 4,774,387 |

During 1912 the equipment of the Rangoon General Hospital was nearly completed. A new medical school was commenced at Nagpur and the extension of the Mayo Hospital, Punjab, is nearing completion. The Lucknow Medical College entered on its second session in October with 27 students in the first-year class. In Bengal special attention is being paid to nursing, both in Calcutta and the Mofussil. From Bihar and Orissa a need for more dispensaries is reported. In the United Provinces the experiment has been tried with success of appointing members of the independent medical profession to the honorary staffs of hospitals. The system of exacting payment from well-to-do patients has been tried in the Punjab and the Central Provinces. In parts of the former it has succeeded, but it is not to be generally adopted. The Central Provinces are giving it a further trial. The Central Provinces are introducing a system of family wards at dispensaries. An anti-tuberculosis league has been founded in Madras. Much attention is being paid to the training of midwives: in the United Provinces nearly 500 of these received elementary instruction during the year: in the Punjab they are trained by the mission school at Ludhiana which receives a subsidy from Government: in Burma they are trained under a "payment by results" system, and twelve were thus certificated during the year.

**Pasteur Institutes.**—There are Pasteur Institutes for anti-rabic treatment at Kasauli (Punjab) and Coonoor (Madras). The number of patients treated in the former in 1912 was 3,548 as against 2,268 in 1911, the corresponding figures for Coonoor being 1,240 as against 940. The establishment of a Pasteur Institute at Rangoon has been sanctioned.

**Lunatic Asylums.**—The treatment of lunatics at asylums prevails on only a small scale in India, where insanity is less prevalent than in European countries. The census of 1911 showed an increase of nearly 22 per cent. in the number of insane since 1901. The number admitted into asylums in 1912 was 1,931, as against 1,804 in 1911. The total asylum population of the year was 8,050. A new asylum is under completion in Bombay.

**Leper Asylums.**—There are many leper asylums, among which may be mentioned the Madras Government Leper Asylum, the Matunga Leper Home, Bombay, the Trivandrum State Leper Asylum, and the Calcutta Leper Asylum. There are also many asylums or homes, frequently under some sort of Government supervision, including about 50 asylums of the Mission to Lepers. The census of 1911 showed an increase in the number of lepers to 109,094, compared with 97,340 in 1901, and the proportion works out to 35 lepers per 100,000 of the population.

# Emigration and Migration.

(*For further details see Statistical Abstract for British India, Tables* 196 *and* 197.)

## Emigration.

Emigration from India, so far as it is brought under the cognizance of Government, is mainly regulated by Act XVII. of 1908 and the Rules issued under its provisions. Emigration to Ceylon, to the Straits Settlements, and for employment under Government only in British East and Central Africa is, however, excepted from the restrictions of the Act. By this Act, natives of India are permitted to emigrate, under contract to labour for hire, only to such countries as have satisfied the Government of India that sufficient provision is made in them for the protection of Indian immigrants; and a similar protection is extended to natives of India engaged to emigrate, individually or in small parties, to work as artisans, entertainers, servants, &c. Emigration, otherwise than under contract to labour or work in one of the above capacities, is not controlled by legislation. Emigration under the Act is now confined to certain British possessions chiefly in the West Indies, to Surinam and St. Croix. Natal was removed from the list in 1911 and Mauritius in 1912.

**Calcutta.**—There were five emigration agencies at work during 1912 at Calcutta. The total number of labourers requisitioned rose from 9,706 in 1911 to 10,447 in 1912. The number supplied to the several colonies in 1911 and 1912 is shown in the margin. The number of recruiting licenses issued (excluding re-issues) was 1,065, as compared with 724 in 1911. The increase was due to the larger demand for emigrants; 54 licenses were cancelled. The total number of emigrants registered during the year was 11,698, giving an average of 11 emigrants per recruiter, as against 17 in the preceding year. This number was contributed by the different provinces in the following proportions:—United Provinces, 75 per cent.; Punjab, 9½ per cent.; Bengal, 6½ per cent.; Bihar and Orissa, 6 per cent.; Ajmere and the Central Provinces, 3 per cent.

| Adult Labourers supplied to— | 1911. | 1912. |
|---|---|---|
| British Guiana | 2,042 | 2,313 |
| Trinidad - - | 2,242 | 2,550 |
| Jamaica - | 816 | 1,409 |
| Natal - - | 1,583 | — |
| Fiji - - | 2,178 | 801 |
| Surinam - - | — | 1,154 |
| Total - - | 8,861 | 8,227 |

The number of emigrants admitted to the Calcutta depôts was 10,599, or 569 less than in 1911. Of the remainder, 955 were rejected subsequently to registration as unfit to emigrate. The percentage of deaths in the depôts and outside hospitals was 0·22, as compared with 0·31 in 1911, and the percentage of rejections increased from 8·24 to 10·09. The percentage of desertions decreased from 1·46 to 0·81. The number that actually embarked was 8,529, as against 9,067 in 1911. They were distributed as follows:—Demerara, 2,392; Trinidad, 2,637; Jamaica, 1,457; Surinam, 1,216; Fiji, 827.. The total number shipped included 2,275 women and 384 returned emigrants who re-emigrated. The death-rate on the ships carrying emigrants was 0·58 per cent., chiefly due to respiratory diseases and cerebro-spinal meningitis.

The number of emigrants who returned from the several colonies was 2,090, and their ascertained aggregate savings amounted to about £27,500. The average savings per head were about £21 for Fiji, £13 for Demerara, and £9 for Natal. About half the number had no savings. None of the emigrants from Mauritius declared any savings.

There was a slight increase in the average amount remitted by resident immigrants in respect of most of the colonies. The average was again highest in the case of Natal (nearly 13*s.*), but this probably includes remittances from traders, &c., as well as labourers. The figures, however, are approximate only.

**Madras.**—The total number of emigrants under the Emigration Act regulations was 2,546, as against 6,256 in 1911. This decrease was owing to the prohibition of emigration to Natal. Emigration in 1912 was solely confined to Fiji.

As regards non-regulated emigration, the number of passengers to the Straits Settlements fell from 109,189 to 107,842, while passages to Ceylon rose from 135,539 to 183,002. Better crops in the Tanjore district, and relaxation of the restrictions imposed by the Government of Ceylon on sanitary grounds, explain respectively these fluctuations. Passengers to Burma decreased.

**Bombay.**—The number of emigrants shipped from the port of Bombay under the Act rose from 196 to 250. Of these, 224 were engaged by the Anglo-Persian Oil Company for service in Persia. From Karachi 443 emigrants left for Uganda, and 80 for the Persian Gulf. An uncertain number of other emigrants, mostly from Surat, left for South Africa.

## Migration.

**Assam.**—Labour for the Assam tea-gardens, and in certain mills, &c. of the Province, is still recruited partly under an indenture system authorised by the Assam Labour and Emigration Act of 1901, but, for some time past, an increasing proportion of the immigrant labour has been engaged under ordinary contract, and Government has gradually withdrawn successive districts from the operation of the Act. They have now announced that the last remaining districts shall be withdrawn by July 1914. In view of the abolition of the penal contract, a Bill has been approved enabling an owner to recover the cost of importation from anyone unlawfully employing a labourer who has left the former's service. The total labour population at the end of March 1913 was 821,735, an increase of 30,273 on the figures for the preceding year. There was a further decline in the number of "Act" labourers, who now number only 11,366. The number of immigrants was 59,873, as against 58,646 in 1911–12. Of the 46,239 adults who immigrated, 42,901 were free labourers. The largest number came from the plains districts of the United Provinces and Bengal. The improvement in the health of coolies during transit was maintained, the number of deaths being 32. The number of proved cases of fraudulent recruitment was 46. The recruitment of certain Bhils from Bombay was a failure, the entire party refusing to work and having to be repatriated at Government expense. The rate of mortality fell to 24·7. Eighteen complaints of ill-treatment were lodged by coolies against employers, of which all but two were dismissed. The relations between planters and villagers continued to be satisfactory, and the constant increase of free immigration shows that the tea-gardens are gaining in popularity as a field of employment.

## Prices.

(*For further details see Statistical Abstract for British India, Tables* 209 *to* 215.)

**General.**—The rise in the prices of commodities in India during recent years has been the subject of much discussion. The marginal table of prices during the 12 years to 1913 has been compiled from Government returns showing the index numbers of the prices of: (*a*) 11 articles imported; (*b*) 28 articles consumed in India or exported; (*c*) food-grains. The prices under (*a*) and (*b*) are wholesale, and under (*c*) retail. The index number of each year represents a simple average of the separate price ratios of the selected articles. In showing the variations the prices of 1873 are taken as 100.

| Year. | Index Number for Articles imported. | Index Number for Articles consumed or exported. | Index Number for Food-grains (Retail Prices). |
|---|---|---|---|
| 1873 - - | 100 | 100 | 100 |
| 1901 - - | 96 | 116 | 157 |
| 1902 - - | 86 | 113 | 141 |
| 1903 - | 88 | 103 | 126 |
| 1904 - - | 93 | 104 | 117 |
| 1905 - - | 96 | 116 | 147 |
| 1906 - - | 105 | 139 | 179 |
| 1907 - - | 116 | 145 | 180 |
| 1908 - - | 106 | 151 | 231 |
| 1909 - - | 99 | 133 | 195 |
| 1910 - - | 109 | 127 | 168 |
| 1911 - - | 113 | 136 | 161 |
| 1912 - - | 117 | 145 | 189 |

After 1900, a year of severe famine, the tendency of prices for articles of Indian produce was, for several years, downward. The prices of imported articles steadily rose from 1902 to 1907, while a sharp and rapid rise in the prices of articles of Indian produce, especially food-grains, began in 1905. This rise was accentuated in 1907 and 1908 by the widespread failure of crops in Northern India. In 1909 and 1910 there was a general decline in prices, and foodstuffs continued to fall till 1912. During the agricultural year, 1912–13, the price of agricultural produce in all provinces showed a general tendency to rise. In some cases this tendency was emphasized by a strong export demand, as in the case of rice, the price of which rose despite an outturn above the average. In the case of the Central Provinces and the North-West Frontier Province, the rise was emphasized by poor harvests, but in the other Provinces it went hand in hand with excellent harvests—even, as in the United Provinces and Bombay,

(Prices.)

where the outturn was better than in the previous year. Landholders whose land revenue assessments have been settled for long periods, and cultivators who hold land at fixed rentals, reap an advantage from high prices. It is probable that the trading classes benefited by the rise in prices, and there is reason to believe that owing to the enhanced demand for labour, due to industrial activity, the advance in wages has kept pace with the rise in great industrial centres. But where wage rates are more or less customary, or where incomes are more or less fixed, as in the case of pensioners, public and private employees, and the professional classes, the increased cost of living is a serious matter. Extra allowances, known as grain compensation allowances, have been made on a large scale to Government servants to cover the cost of dearer food.

## Wages.

(*For further details see Statistical Abstract for British India, Tables* 206 *to* 208.)

A scheme was recently introduced for quinquennial wage-census to be taken in the various provinces, and the results of such censuses taken in 1911 are now available; in some cases a preliminary census was taken at an earlier date, and the comparison is instructive. The results obtained are stated to be more reliable than the wage statistics hitherto available.

It should be recollected in reading the following accounts of these censuses that the years 1910 and 1911 witnessed a marked fall in food prices.

**Bengal** (as it stood in 1911).—A preliminary census was taken in 1908 and a regular census in 1911; but the exceptional conditions in the former year, which was a time of great scarcity, makes comparison difficult. The usual daily wage of an unskilled agricultural labourer in 1911 varied from 2*d.* in Chota Nagpur to 4*d.* in the Burdwan and Presidency divisions. Urban unskilled labour receives from 2½*d.* to 5*d.*; rates for skilled labour are so varied that no general statement is possible. Masons get from 6*d.* to 8*d.*, and in Calcutta up to 11*d.* In Calcutta a blacksmith or carpenter can get as much as 1*s.* 4*d.* a day.

**Eastern Bengal and Assam.**—In Eastern Bengal the average daily wage of an agricultural labourer varies from 6*d.* in Dacca to 11*d.* in the Chittagong Hill Tracts (the latter figure, however, is a temporary figure due to seasonal migrations). In Assam they run from 5*d.* to 8*d.*

**United Provinces.**—A census was taken in 1906 and again in 1911. Unskilled agricultural labour shows an all-round rise in the Western districts, while in the Eastern districts the rise is less apparent and in Bundelkhand there has been little change. The daily rates vary from about 1½*d.* in the East to about 4*d.* in the Hill tracts. These rates, however, are probably abnormally low, owing to a bad autumn harvest. Urban wages ranged from 3*d.* to 6*d.* for unskilled, and 6*d.* to 2*s.* for skilled labour. The rise of urban wages is almost universal.

**Punjab.**—A preliminary census was held in 1909 and a regular census in 1912. Rural wages rose in the interval in almost every district. The old customary rate of 2*d.* a day survives only in Gurgaon; elsewhere the most common rates range from 4*d.* to 8*d.*, being lowest in the East.

**North-West Frontier Province.**—The rates are, on the whole, higher than for the nearest districts in the Punjab, probably owing to the demand for labour due to the extension and improvement of cultivation.

**Central Provinces.**—For the three agricultural years 1910–11 to 1912–13 fairly reliable figures have been returned. They show a slight but continuous rise both in urban and rural wages. The latter range from about 3*d.* a day in Chhattisgarh to 4*d.* a day in Berar and Nagpur. The considerable irrigation and railway programmes, and the gradual improvement of agriculture, account for these rises, which, however, are partly counteracted by the rise in prices since 1911.

(Wages.)

**Burma.**—In the rapidly developing districts of Lower Burma (except the Arakan littoral), and in the North of Upper Burma, where conditions are backward and labour difficult to maintain, wages are high, rising to as much as 1*s.* 4*d.* a day for agricultural labour. On the Arakan littoral, and in the Upper Burma dry zone, the wages are lower, though considerably higher than in most parts of India proper, the minimum being 4*d.* a day. Daily wages are only paid for minor agricultural operations, the majority of agricultural labourers being paid by the season. An extraordinary amount of the field work is done by women.

**Madras.**—There was a general rise of wages between 1908 and 1911. The minimum daily rate for rural unskilled labour ranges from 1½*d.* in the Deccan to 2 annas in all other wage-tracts; the maximum from 4*d.* in the Deccan to 8*d.* in the South. During 1912–13 the price of labour rose with the price of food grains.

**Bombay.**—Only one census has been taken—in 1911. Plague has decreased the available supply of labour, and the existence of a mill industry, together with the progress of large schemes of dock and railway extension, the Tata Hydro-Electric Works, &c., has a beneficial effect on agricultural wages, which in most districts average about 4*d.* a day, except where the presence of primitive tribes results in lower rates. In Sind wages are higher.

## Famine or Scarcity.

In Bombay famine was declared in all Tálukas but one of the Ahmednagar District, but it was not found necessary to start relief works, owing to the readiness with which the affected population found work on ordinary works in progress. Gratuitous relief was given to the extent of £18,492, the maximum number on relief at one time being 18,770. The Poor House test was successfully used to test eligibility. Relief was also afforded from private contributions, and eight cattle-camps were maintained

In the United Provinces the early termination of the monsoon caused a failure of crops in the Benares Division and it was necessary to open test works at Mirzapur. Relief works were also opened for the benefit of a small area in British Baluchistan and gratuitous relief was given in one tahsil of Ajmer-Merwara.

## General Remarks.

**Bengal.**—The agricultural and labouring classes are prosperous, as the harvests have been good, and, while the cultivator benefits by the high prices now obtaining, the labourer finds in rising wages a compensation for them. Middle-class people, however, with small fixed incomes are suffering from the greater cost of living. The year 1912 was less healthy than its predecessor, cholera and malaria being particularly prevalent. The state of trade and manufactures indicates prosperity.

**Bihar and Orissa.**—Despite indifferent harvests in most divisions there were few signs of distress, owing to the plentiful harvests of recent years. In the Chota Nagpur division there was considerable mining activity, and the Tata Iron and Steel Company expanded their works. The condition of backward tribes in Ranchi, Angul, and elsewhere, is improving. The year was on the whole healthy.

**Assam.**—Save for floods in Sibsagar, cattle diseases in Lakhimpur, and crop failures in a few hill areas, the province was prosperous. The Lushai hills are slowly recovering from previous scarcity.

**United Provinces.**—The year was characterized by general prosperity and freedom from sickness, mortality from epidemic diseases showing a specially marked decrease. The agricultural situation, at one time threatening, was saved by timely rain. As the result of good harvests, there was much agricultural produce available for export, for which an increasing demand in Europe secured high prices.

**Punjab.**—The improved condition of agriculturists is indicated by the rise in the value of land. The number of sales increased, with the net result that the area of land held by non-agriculturists decreased. Cash wages are being widely substituted for grain. There were extensive purchases of proprietary rights in the canal colonies. There was a large increase of exports—especially of barley and gram—the demand for which from Europe is benefiting the poorer districts in the east of the Province. Health improved, plague and malaria being comparatively mild in 1912.

**(General Remarks.)**

**North-West Frontier Province.**—The agricultural season was not very good, and prices of food grains were high; but so keen was the demand for labour that the prosperity of the people remained generally unimpaired.

**Central Provinces and Berar.**—The year was an unhealthy one, owing chiefly to epidemics of cholera and small-pox. Crops were rather below normal, and prices ruled high; but here again shortage of labour, aided by brisk trade, kept up the rates of wages and ensured a continuance of prosperity.

**Burma.**—With a series of excellent harvest and prices of the staple products at a high level, the agricultural population did well. The seasonal migration from the dry zone to Lower Burma after the harvest was consequently less than usual. The health of the province was not so good in 1912 as in 1911; a violent outbreak of malaria at Minbu was attributed to the introduction of irrigation. It was, however, successfully coped with.

**Madras.**—The season was on the whole good; both prices and wages rose. There was a small increase in the death-rate due to malaria and cholera. Agriculturists are making considerable profit by their successful adoption of such crops as Cambodia cotton and ground-nuts. Land is passing from the hands of absentees into those of cultivators. Here, as elsewhere, there is a general complaint of the scarcity of labour.

**Bombay.**—After the unsatisfactory season of 1911–12 the Presidency enjoyed, on the whole, good harvests, with the exception of the East Deccan, where famine was declared. So keen, however, was the demand for labour in the surrounding districts that the population readily obtained work away from home. Labour is becoming not only scarcer but increasingly fluid, to the immense strengthening of the position of the wage-earner. Even the backward aboriginal tribes, who have hitherto lived in a state of quasi-serfdom, are now demanding cash-wages as a condition of remaining with their employers. One result of these conditions is that mechanical devices are becoming increasingly popular with the agriculturist. For the cotton industry the season was highly prosperous. The year was less healthy than 1911.

# CHAPTER XVII.

## ARMY AND MARINE.

*(For further details see Statistical Abstract for British India, Tables 70 and 187 to 195.)*

### Army.

The sanctioned establishment of the army in India for 1912–13 and its actual strength on 1st April 1913 were as follows:—

| | Sanctioned Establishment. | Actual Strength. |
|---|---|---|
| Troops under the orders of the Commander-in-Chief in India: | | |
| British officers | 5,756 | 5,686 |
| British warrant and non-commissioned officers and men | 73,233 | 73,395 |
| Native officers, non-commissioned officers, and men | 160,091 | 143,920 |
| Troops not under the orders of the Commander-in-Chief*: | | |
| British officers | 9 | 9 |
| Indian officers, non-commissioned officers, and men | 24,466 | 22,751 |
| Total, 1912–13 | 263,555 | 251,761 |
| „ 1911–12 | 260,582 | 252,741 |

In 1912–13 seven battalions of Native infantry and one battery of Indian artillery were employed in the colonies and in China. One mountain battery of Royal Garrison artillery was employed in Egypt. There was an Indian contingent in Somaliland, and detachments of infantry and cavalry were employed in Persia.

The sanctioned establishment of the Native army reserve was 35,717 and its actual strength on 1st April 1913 was 33,712, as against 38,811 on 1st April 1912.

The number of Volunteers in the whole of India on 1st April was as under:—

| | 1912. | 1913. |
|---|---|---|
| Enrolled strength | 38,948 | 41,083 |
| Efficients | 38,247 | 33,830 |
| Reservists | 3,113 | 3,178 |

The net expenditure on the army (exclusive of Military Works and Special Defence Works) in 1912–13 as compared with that in 1911–12 was as follows:—

| | 1911–12. | 1912–13. |
|---|---|---|
| | £ | £ |
| Effective charges | 15,271,932 | 15,231,375 |
| Non-effective charges | 3,085,248 | 3,117,348 |
| Total | 18,357,180 | 18,348,723 |

During 1912–13 special funds were allotted for the purchase of rifles, the re-armament of artillery, survey operations on the North-East Frontier, and operations for the suppression of the arms traffic in the Persian Gulf. Progress was made in the improvement of lines for Indian infantry and cavalry. The question of the possibility of effecting economies in military expenditure was under the consideration of the Army in India Committee, presided over by Field-Marshal Lord Nicholson.

* Including Imperial Service Troops.

**(Army.)**

*Health of the British and Native Armies.*—During the year 1912 there were no adverse conditions to check the remarkable improvement of recent years. In the British Army the rates of invaliding and of mortality shown in the table given below were the lowest ever recorded. Enteric, malaria, and dysentery were less prevalent, but cholera, pneumonia, and venereal disease slightly more so. Owing, however, to improved treatment, invaliding rates for the last named declined. An important cause of the recent rapid improvement in health is personal hygiene, soldiers being instructed how to protect themselves against enteric fever and malaria. As regards enteric fever, they are taught by leaflets and lectures the advantages of inoculation; while mosquito curtains, anti-larval operations, segregation, and quinine treatment are employed to guard against malaria. The marked decline in venereal diseases is attributed, apart from improvement of treatment, to the encouragement of healthy pastimes, to education and a better moral tone, and to the growth of temperance. There was greater sickness and mortality during 1912 in the Northern than in the Southern Army. There was a decline in invaliding from 512 to 474; diseases of the heart, tubercle of the lungs, nervous, mental, and local injuries being the chief causes. The decline of admissions for enteric from 3·8 to 2·6 per mille and malaria from 90·2 to 82·4 per mille is particularly gratifying. The rate for all venereal diseases was 55·5 per mille, as compared with 53·1 per mille, but the average number constantly sick from this cause has decreased. The chief causes of death were enteric fever and abscess of the liver, the mortality from these being 0·39 and 0·32 respectively. Of the 26 deaths from enteric ten were inoculated.

The health of the Native troops was good, though the admission rate has risen, probably owing to the inclusion of what had previously been reckoned as negligible complaints. The death-rate was the lowest on record. The chief cause of sickness was, as usual, malaria, the admission rate for 1912 being 89 per mille, as against 105 in 1911; the decrease was due partly to a more favourable year, and partly to anti-malarial measures which are being strenuously carried out in all cantonments. Pyrexia, dysentery, and respiratory diseases were other important causes of sickness. Pneumonia, as usual, was the chief cause of mortality, the rate being 0·83 per mille. Enteric, cholera, and malaria helped to swell the mortality. There were 18 deaths from plague during the year. The chief causes of invaliding were tubercle of the lungs, anæmia, venereal diseases, and debility. Sickness was much higher in the Northern Army, but death-rate was higher in the Southern.

| | Ratio per Mille of Strength. | | | | | |
|---|---|---|---|---|---|---|
| | British Troops. | | | Native Troops. | | |
| | Average 1901–10. | 1911. | 1912. | Average 1901–10. | 1911. | 1912. |
| Admissions into hospital - | 864·2 | 524·7 | 547·9 | 655·3 | 515·8 | 547·5 |
| Constantly sick - - - | 52 | 29 | 29 | 23·8 | 19·8 | 20·1 |
| Deaths - - - - | 9·91 | 4·89 | 4·62 | 7·88 | 4·48 | 4·42 |
| Invalids - - - | 24·4 | 7·1 | 6·7 | 8·7 | 4·43 | 4·61 |

## Military Works.

The net expenditure on military works in 1912–13 amounted to £815,217. There was also an expenditure of £9,267 on Special Defence Works. The corresponding figures for 1911–12 were £830,866 and £4,706.

## Marine.

The net expenditure on marine services amounted to £392,259 in 1912–13, as against £365,828 in 1911–12. In this amount are included the cost of the Royal Indian Marine and the contribution towards the expenses of His Majesty's ships employed in the Indian seas.

On the 1st April 1913 the Royal Indian Marine consisted of three troopships and six other sea-going vessels, three inland vessels, three flats, and a number of small steamers, launches, &c. There was an establishment of 104 executive officers, 82 engineer officers, 65 warrant officers, and 12 assistant surgeons of the Indian Subordinate Medical Department; while the native crews of the vessels (seamen, artificers, and others) numbered, in all, about 1,900 men.

# CHAPTER XVIII.

## FRONTIERS AND NATIVE STATES.

### Frontier States.

**Baluchistan: Frontier and Native States.**—During the year 1912–13 the Quetta-Pishin, Sibi and Chagai districts were maintained in an orderly and well-administered condition, and were at no time a cause of anxiety. But in the eastern and north-eastern districts, Zhob and Loralai, the continued prevalence of raids and disorder made it necessary to employ special detachments of troops for the preservation of order from July to the end of the year. The results were most satisfactory. Many old cases have since been settled, and tribal responsibility has been enforced. On the whole the conduct of the tribes was exceedingly good.

The country was prosperous. The return of rail-borne trade showed an increase of £540,000 in imports and of £155,000 in exports, while the total trade of the Nushki trade route increased by £60,000 to £310,000. The site of the Nushki Bazar having been settled, a new railway station is to be erected at Nushki.

Over 5,000 cases, both civil and criminal, were disposed of by jirga; a great increase was recorded in the Quetta district. The work is of great utility, but the amount that can be done without imposing an unreasonable burden upon the leading men of the district is limited. Probably in the future more cases will be referred to Civil courts for settlement by arbitration, a reference to a jirga following if no arrangement can thus be effected.

Arboriculture and agricultural experiments, and the development of the fruit industry, received attention during the year. The fruit farm is at Quetta. The cultivation of saffron and Egyptian clover appears likely to be successful.

In irrigation some improvements were effected in the Quetta-Pishin district. Elsewhere there are four important and costly schemes under consideration, but owing to the rights of tribes and private persons over the rivers, and to the quantity of silt brought down by flood water, the question is a very difficult one, and demands careful examination. Meanwhile the deficiency of water is a hindrance to agriculture. In view of the developments aimed at it is important to consider not only irrigation schemes, but the best means of economising the existing resources, and attempts are being made to teach the people this lesson.

The prospects of education, for which there is little wish on the part of the people, are not encouraging. Though four new primary schools were opened, six had to be closed for want of attendance.

In Kalat efforts were made with success to induce the Khan to take a more direct and personal interest in his State, and it is expected that in the course of the ensuing year marked progress will be made in various departments of the administration.

The Las Bela State appears to be in a backward condition. Towards the close of the year the Jam showed more interest in the administration, in which there is considerable room for improvement.

On the whole the administration of Kharan proceeded quietly. Serious attention has been given to the question of arms; all rifles in possession of Kharan subjects are now registered, and the importation of fresh rifles is forbidden. Throughout Baluchistan the import of rifled firearms and ammunition for the same is now illegal unless covered by a license. The country has little immediate concern with the arms traffic, though it suffers from the result of it. As long as there is no effective Government in Eastern Persia it is not likely that arms traders will take the additional risk of passing through Baluchistan. Military detachments, however, are retained as a precaution, at Kacha and Robat. A new post of the Chagai Levy Corps has been built at Sohtagan, and a line of posts of the Makran Levy Corps extends from Grawag to the sea. The district levies are also posted with a view to preventing the passage of individual smugglers.

**North-West Frontier Province.**—Relations with the border tribes were exceptionally friendly during the year. At no time was there any likelihood of war; raiding decreased in a marked degree, and such offences as were committed by tribesmen were settled with the jirgas promptly and without difficulty. Waziristan was almost the only source of real anxiety, but despite the difficulty of gaining the confidence of

**(Frontier States.)**

the Mahsuds and Wazirs and of counteracting the influence of their Mullas, every year that passes without an expedition denotes an increased hold over the tribes. In both the Wana and the Tochi Agencies crime decreased, and the militias were even more successful than usual in intercepting raiders and inflicting severe punishment. The Mahsuds were more than ever sapped by internal feuds, and the very house of the Mulla Powindah was divided against itself. Since the close of the year the Mulla himself has died. In the Tochi the people showed some inclination to refer their disputes to British officers instead of taking the law into their own hands. Shortly after the close of the year, certain British posts in the Tochi were attacked by bodies composed mainly of outlaws and others from the neighbouring Afghan province of Khost, but including some Wazirs. Order was restored without difficulty.

Next in interest was Kurram, which came into unusual prominence owing to the revolt, referred to in the previous report, in Khost. After some preliminary successes, the rebels closely invested the Governor of Khost in his capital, Matun, and the Afghan authorities, compelled to resort to negotiation, finally induced the revolting tribesmen to disperse. The tribesmen could not, however, be said to have been subdued; they still refused to pay any revenue or to allow any Afghan officials or soldiers to enter their hills. The situation in Kurram was serious for a time owing to the large bodies of rebels who established themselves on the very border, intending to use our territory as a base of operations against Khost, and as a refuge in case of defeat. To prevent a violation of British territory 600 rifles of the Kurram Militia were sent to the border, and the rebel forces were induced to leave its immediate neighbourhood. With some difficulty the Turis of Kurram, who have many grievances against the Afghan authorities, were restrained from joining the rebels.

Owing to the naval operations the Persian Gulf arms trade steadily sank in volume and importance, but the organisation exists, and relaxation of supervision in the Gulf would rapidly revive the traffic. The local manufacture of arms received a considerable impetus, and in addition to the old established firms of the Kohat Pass, new factories were started in Waziristan, the Mohmand country, the Malakand Agency and Boner. The arms, however, were of inferior quality and short-lived, while, being hand-made, their output was limited.

The discipline and behaviour of all the frontier militia corps were very good. There was a marked absence of serious crime on the border, and only one rifle out of nearly 7,000 was lost. Local allowances were granted in December 1912 to the two Waziristan corps. In the N. Waziristan Militia, hopes were entertained that the increase of pay would prove to have solved the recruiting question. There was a marked decrease in the number of applicants for discharge, and recruits of a better stamp came forward for enlistment. The work of the S. Waziristan Militia was excessive, calling for an increase of strength.

The new Frontier Constabulary, which replaces the long-condemned Border Police, was instituted at the close of 1912. Steps were taken to select for discharge from the existing Border Military Police all those who, on the score either of age or of inefficiency, were unsuited for transfer to the Border Constabulary. Owing to the necessity of keeping the garrisons of existing posts up to reasonable strength and to some delay in the arrival of the new British officers, progress was not so rapid as it would otherwise have been. The terms of service appear popular, and the corps has now been brought up virtually to full strength.

**Kashmir.**—The receipts for the year were £887,000, the expenditure £782,000, resulting in a surplus of the unprecedented amount of £105,000. This result was due principally to customs, forests, and public works. At the close of the financial year the investments held by the State had risen, by £60,000, to £334,000.

The total value of the Central Asian trade for 1912–13 was about £219,000. Trade with Tibet was normal. Progress was made with the new track from Leh to the Karakoram pass, which will give impetus to the Central Asian caravan trade.

Improvements were made in the pay and pension of non-commissioned officers, sepoys, and followers of the Imperial Service troops. New barracks at Satwari, Srinagar, Gilgit, and Rattu are nearing completion. The State Cadet School promises well and should turn out non-commissioned officers above the present standard in education and intelligence.

With regard to sericulture in Kashmir, the number of rearers and amount of seed given out continued to increase. Sericulture in Jammu is still on a small scale and has many difficulties to meet.

The area of demarcated forests increased and the financial results of the year were satisfactory. A training class for foresters and guards was sanctioned.

The total cost of education rose from £24,000 in 1911–12 to £32,000. A European officer of the Indian Educational Service was appointed Principal of the Prince of Wales' College, Jammu. Grants-in-aid were made to 25 indigenous schools. Education among Muhammadans, who form the majority of the population, is still very backward and is engaging the special attention of the Darbar. Religious and moral instruction is imparted in all State schools.

Considerable increase was made in the amount of medical and surgical relief afforded. Two new dispensaries were opened and others rebuilt. A small leper asylum at Leh was constructed. Vaccinations increased by 2,737. The only epidemic was one of small-pox in Srinagar city, which resulted in 876 cases and 259 deaths. Expenditure was incurred in paving, draining, and general sanitary improvements in the Srinagar and Jammu cities and in Baramulla. Reforms were made in the medical administration of the Gilgit Agency, resulting in an increase of efficiency and of aid rendered.

Successful dredging operations in the Jhelum river reduced the level of the Woolar lake, and 49,000 acres of swampy land adjoining were rendered available for reclamation.

In the Ilaqua of Poonch a partial failure of crops necessitated steps to check the export of grain. The import and export trade showed a very large increase on previous years, mainly due to improved roads. Only one Tehsil was without a well-built hospital. Various sanitary improvements were made in the town of Poonch. Nine new free Primary Schools were opened, bringing the total to 46. Reductions were effected of various over-staffed departments. The Raja Sahib started the practice of holding public darbars for the disposal of business, which are much appreciated by his subjects.

**Sikkim.**—The finances of the State were in a sound condition and the people were in comparatively comfortable circumstances. Fearing, however, lest the growing prosperity of the inhabitants should be undermined by debt, the Council of the State fixed the maximum rate of interest to be charged by money-lenders at 12½ per cent. simple interest per annum, prohibited the lending of money upon the security of agricultural produce, and passed orders restricting the liberty of Marwaris, who are the chief money-lenders, to settle and to hold land in Sikkim.

The total export and import trade with India has risen from £115,000 in 1908–09 to £191,000 in 1912–13. A light railway was under construction from Siliguri to Teesta Bridge (in the Darjeeling District). It is anticipated that on the completion of this line the trade of Sikkim with British India, especially in perishable products, will still further be increased. Negotiations were being conducted with a firm in Calcutta with a view to the development of the minerals, forests, and water-power of the State.

Steps were taken to improve the system of land administration, to equalise the incidence of the revenue demand and of rents, and to ensure the State's sharing in the increasing revenues of the landlords. Laws also were passed prohibiting polyandry and restricting the sale of cigarettes.

The State forest department, which is under the direct control of the Maharaj Kumar, was active in protecting the forests from fire and encroachment, maintaining landslip reserves, nurseries, and experimental rubber plantations, and establishing roadside reserves. Many of the landlords were induced to prohibit grazing in one-half of their forest areas.

The police force preserved order satisfactorily and dealt successfully with the extra work involved by the passage of a large number of Chinese through Sikkim, on their way from Lhasa to Calcutta and China.

The steady increase during recent years in the number of persons seeking medical relief was maintained, over 25,000 attendances being recorded at the different hospitals and dispensaries in the State. A threatened invasion of small-pox from Nepal was averted by the adoption of prompt measures, 9,580 persons being vaccinated.

Good progress was made in the Bhutia and Nepali boarding schools, and in the monastic school at Gangtok, and also in the village mission and technical schools. It has been resolved by the Council that all landlords should send at least half their sons of school-going age to school for English education.

* Since the close of the year the Maharaja of Sikkim has died, and the succession of his second son has been approved by the Government of India.

**(Frontier States.)**

**Assam Border Tribes.**—The year was a very eventful one in the history of Assam frontier administration. Attention was directed mainly to the North-East Frontier and to the policy to be followed to ensure its more effective control. To this end several important measures were introduced. A separate district has been formed comprising the tribal area on the frontier and divided into two sections, each under the control of a political officer working directly under the Chief Commissioner. Survey operations and road construction on an extensive scale were undertaken and were still in progress when the year closed. The Abors gave no trouble during the year. A trade post was established at Pasighat. Certain of the Mishmis taking advantage of the removal of the blockade against them came to Sadiya in large numbers for trade. The customary allowances (*posa*) were distributed to Bhutias, Akas, and Daflas. The usual peaceful intercourse with the Apa Tanangs was uninterrupted, and the conduct of the hill Miris was good.

On the Naga hills border an expedition was despatched to punish a trans-frontier village for an outrage committed on certain British subjects. The resistance encountered necessitated the despatch of a second force which inflicted summary punishment on the villages concerned and secured the peace of the frontier. In the Khasi and Jaintia hills and in Lushai territory the year was uneventful.

Information regarding the Manipur State is given on page 138.

**Burma: Kachin Hills and North-Eastern Frontier.**—On the North-Eastern border explorations were the principal feature of the year. Expeditions were made through Hkamti Long to the headwaters of the Malikha and into the 'Nmai and Mekh valleys. Relations with the Chinese authorities and trans-frontier tribes continued satisfactory. Hpimaw was occupied and a post established there. There was a slight decrease in crime. The reservation of some new forest areas in the Bhamo, Myitkyina, and Katha districts was proceeded with. Progress was made in the construction of roads, a mule track from Htawgaw to Hpimaw being almost completed, and over 30 miles of new road being made in the Bhamo District.

**The Chin Hills.**—No events of note were recorded. The unadministered tribes gave practically no trouble and crime was insignificant. Rats again devastated the crops in certain parts, but there was no famine. An attempt was made to combat the spread of leprosy in the northern parts of the hills, and further measures are in contemplation. In the hill district of Arakan it was found possible to withdraw the military police outposts from Pengwa and Sami.

**Shan States.**—The Southern Shan States enjoyed peace on their border; and internally, with few exceptions, the administration of the country was satisfactorily conducted. The approach of the Southern Shan States Railway is having a disturbing effect on the Hsa Mong Hkam State, where a large increase in crime was experienced. The total revenue of the States increased. The agricultural year was on the whole favourable, and the rice crop was good. Trade expanded and the forests yielded a better revenue. Expenditure on public works increased.

In the Northern Shan States the frontier remained quiet during the year, and the administration was satisfactorily, if uneventfully, carried on. Crime decreased, but the volume of it is in any case small. The rainfall was sufficient; the rice crop was up to the average and other crops fared well, though tea suffered from an abnormally hot season. Expenditure on public works increased, the amount contributed from the revenues of the State being over £30,000. The total revenue of the country improved and the finances of the various States were generally in a sound condition. In the State of Mong Mit and the two small Shan States of Thaungthut and Kanti in the Upper Chindwin District, the year was again one of peace and prosperity.

**Karenni.**—In Karenni the Council of the State of Kantarawadi was abolished, and a Sawbwa was installed in its stead. Crops were good and the timber trade revived. The construction of the Ngwedaung-Loikaw Canal was completed, and large extensions of paddy cultivation resulted from it.

## Native States.

**Hyderabad.**—The following information is for the calendar year 1912:—

The rank of Honorary Colonel was bestowed upon His Highness Sir Usman Ali Khan, Nizam of Hyderabad, who was appointed Honorary Colonel of the 20th Deccan

Horse. The Nawab Salar Jang was appointed Minister of the Hyderabad State on the 11th July 1912, with Sayyid Hussain Belgrami (Imad-ul-Mulk) as special adviser. The rainfall in the State was, on the whole, fair. Five districts, however, received less than 20 inches; and in Aurangabad, Bir, and Nalgunda the rainfall was so small as to give rise to scarcity. The plague epidemic continued throughout the cold season of 1911–12. It practically ceased about the month of May 1912.

Gold to the value of £46,386 8*s.* 3*d.* was won by the Hutti (Nizam's) Gold Mining Company during the nine months which ended on the 30th June 1912. During the three months following the 30th June 1912, a further quantity, valued roughly at 16,000*l.*, was won. The output of coal at the Singareni Collieries was 481,652 tons, a decrease of 23,728 tons, or 4·7 per cent., compared with that of the preceding year.

The proceedings of the Court of Arbitration appointed in 1911 to settle the Godavari river boundary dispute between the British and Hyderabad Governments were completed, and final orders delivered, in July 1912. This important decision, which has removed a long-standing grievance of the Nizam's Government, was to the following effect:—

1. That the middle line of the deep stream should be the political boundary between the Madras Presidency and the Hyderabad State. This decision must be construed as subject to all existing settlements, which should remain undisturbed.
2. That the British Government should have full power to deal with the Dumagudium anicut and the channels in the river bed for purposes of navigation.
3. That for the purpose of working minerals the toe of either bank is to be taken as the boundary on each side of the river bed, and that all mining rights and rights to minerals in or under the river bed vest in the Nizam's Government.
4. That the boundary agreed upon begins from the north-west corner of the Sironcha taluq in the Central Provinces, and runs down to the extreme point of the Hyderabad territory on the right bank where the Godavari begins to flow between British territories on both banks.
5. That the agreement as to mineral rights covers this area of the river bed, including the stretch of about ten miles south of the junction of the Indravati with the Godavari, where the territory on the left bank was in the possession of the British before the supplementary treaty of 1860.
6. That the mining rights and rights to minerals in or under the bed of the river include similar rights in or under islands in the river, except that the so-called islands of Konaiguram, Mariguram, Boiguram, and Narasareddiguram are recognised as exclusively British territory so far as mineral rights are concerned.

It was decided by the President that the expression "*existing settlements*" in the first paragraph of the agreement has reference to the island of Motigedda alone, and that the rule regarding the middle line of the deep stream must govern the political jurisdiction over all islands in the deep stream, including the so-called islands of Konaiguram, Mariguram, Boiguram, and Narasareddiguram.

A decision in the case of the boundary dispute between Ushtepalli in the Hyderabad State, and Gudimetla in the Madras Presidency (referred to in the Report for 1910–11), was also arrived at, but the final orders of the Court of Arbitration had not been delivered at the end of the year.

**Mysore.**—The rainfall was abundant and well distributed. The outturn of all crops was more satisfactory than in 1911–12, but, owing to export, the prices of food-grains rose.

The birth-rate was 19·11 per mille of population against 19·00 in the preceding year, while the death-rate was 18·02 against 19·62 during 1911–12. But for cholera, which appeared in an epidemic form in four districts, public health was generally good throughout the State. Fever, as usual, contributed the largest number of deaths, but the mortality from plague showed a considerable decrease. Preventive measures against plague were adopted wherever necessary. The total number of persons vaccinated was 90,118, showing an increase of 15,431 as compared with 1911–12. The medical department continued to do good work, and a new ophthalmic hospital was completed at a cost of nearly £18,000.

**(Native States.)**

Cattle shows and exhibitions were held in 19 places, and the success attending these shows is an indication that the people appreciate them. Lectures are usually given by officers of the Veterinary and Health Departments, and demonstrations are arranged by officers of the Agricultural Department for the instruction of the general public.

Re-survey operations were completed in 608 villages covering an area of 676·03 square miles.

The progress in the co-operative movement was maintained, the number of societies rising from 208 to 342. As in the previous year a Provincial Co-operative Conference was held at Mysore. Two of the agricultural banks were compulsorily wound up, leaving only four working institutions, and, wherever conditions were favourable, co-operative societies were formed so as to provide credit facilities to the members of the defunct agricultural banks. Three new joint stock companies were registered and four were wound up, and the total number working at the end of the year was 54.

The total value of the gold produced in the mines was £2,158,000, and the royalty realised by the State amounted to £126,000. The quantity of manganese ore extracted was 23,332 tons. Renewed interest was taken in chrome mining, and the Tata Iron and Steel Works received licences to work magnesite deposits. Exploring and prospecting licences were also granted for certain deposits of iron ore.

The total expenditure on public works from all sources, including local funds, was about £340,000, against £296,000 during the year 1911–12. Of this amount £156,000 were spent on irrigation works and £183,000 on civil works and military buildings. The most important irrigation work in hand was the construction of the first stage of a dam across the river Cauvery at Kannambadi, which, excluding the connected electrical power scheme, is estimated to cost about £606,000. A separate Railway Secretariat was established to deal with the growing work. The department was engaged in revising old projects and preparing new ones. The Bowringpet-Kolar Railway was almost completed, and work on the Bangalore-Chikballapur Light Railway made satisfactory progress.

The sanctioned strength of the regular police force slightly increased and amounted to 840 officers and 5,115 men. The cost of the police administration was £67,000.

The work of the Economic Conference was further developed, and action was taken on the recommendations of the Conference in various directions. A great impetus was given to the improvement of primary and technical education, and a Bill was drawn up for introducing compulsory education. A special grant of £16,000 was sanctioned for opening new primary schools and improving the existing ones and for the construction of village school buildings. A comprehensive scheme of elementary and advanced technical and commercial education was approved; the main features are the establishment of a Technical Institute at Mysore and a Commercial and a Mechanical Engineering School at Bangalore. Further arrangements were in progress to complete the equipment and the staff of the two first-grade colleges in the State. The total number of educational institutions, both public and private, increased from 4,478 to 4,568 and their attendance from 149,214 to 156,440. A separate department of Industries and Commerce was constituted for the purpose of stimulating industrial activity, and its energies were directed towards experimental industries carried on at the expense of Government, industrial work for private individuals carried on at their own cost and general industrial enquiries.

The Legislative Council held one meeting during the year. Eleven bills were considered, including six which were pending from the previous year. Two of these were passed into law and the remaining nine were in various stages of progress.

The actual receipts during the year under service heads were £1,730,000, and the expenditure was £1,500,000.

**Baroda.**—The following information is for the year ending 31st July 1912 :—

The total revenue of the State under all heads amounted to £960,000 as against £1,146,000 in the previous year. The decrease was chiefly under the head of land revenue and was due to the partial failure of the rains. The total expenditure during the year was £1,160,000 against £930,000 in 1910–11. During the past decade the income from land revenue, Abkari, railways and opium shows a considerable increase, but a larger expenditure is now incurred on the medical department, on agriculture, public works, and education, the expenditure on the last-named department having risen from £44,000 to £98,000, chiefly through the introduction of free and compulsory education. Owing to famine the net assets of the State, exclusive of opium,

fell from £2,720,000 to £2,520,000. To meet the deficit the Durbar borrowed from the Palace fund and also sold Government promissory notes and debentures of the face value of £400,000. Custom duties have been retained only at Chandod in the Baroda district and at sea ports in Amreli. The opium sold in the State realised a profit of £18,000, while the profits on the opium sold in Bombay rose from £32,000 in the preceding year to £72,000. The Durbar were allowed 7 per cent. of the total consignment of Malwa opium for export to China and were placed on the same footing as Malwa States as regards a half share of the increase in pass duty and average amount realised from the sale of the right to export.

Honorary correspondents were appointed to assist the Department of Agriculture in obtaining exact information regarding crops, insect pests, and cattle disease. The model farms were employed in experiments of new crops and in the production of good seed by selection.

During the year the rainfall was insufficient throughout the State. In Kadi and Amreli the fall was only one-fourth and one-third of the average, and famine was declared in these two districts. The measures taken to deal with the famine may be briefly summarised as follows:—Large suspensions of land revenue were made, £80,000 were given in tacavi loans free of interest, steps were taken to improve the water-supply in affected districts, 14,400 tons of grass were obtained by purchase or from State lands for feeding cattle, camps for cattle were opened and relief works started and kept open for nine months. The total number of units relieved during this period was 2,211,478 on works, and 196,381 units were afforded gratuitous relief. The total expenditure on operations for the relief of the affected districts amounted to £138,000, of which three-fourths should be recovered on repayment of the loans advanced.

The public health was fairly good. There were 1,272 cases of plague as against 6,512 in 1910–11. There were 58 medical institutions, and the number of cases treated during the year was 354,591; out of these, 4,283 were indoor patients. 2,422 major and 15,583 minor operations were performed.

Of the 86 factories of all kinds, 76 were worked by steam, two by oil, one by electricity and the rest by manual labour.

There were five agricultural banks with a capital of £11,000, but their working was not considered to be satisfactory. The number of co-operative credit societies was 124, with a working capital of £13,400.

The Public Works expenditure amounted to £293,000 as against £180,000 in 1910–11. 56 miles of railway line were opened for traffic, 66 miles of line were nearing completion and 105 were under construction. The Durbar spent £130,000 on railways.

The total number of educational institutions was 2,961 as against 3,026 in the previous year, while the number of students rose from 185,497 to 188,373, about 10 per cent. of the population. Owing to famine a number of schools in the affected districts had to be closed. During the year 8,641 students were learning English. All boys under 12 and girls under 11 years of age are compelled to attend school and to study up to the 4th standard. The question of raising the age limit is under consideration. There are now 302 public libraries in the State, and the experiment of sending out travelling libraries has been tried.

Five thousand eight hundred and twenty-nine cases were investigated by the police. The percentage of cases in which property was recovered was 65·93 as against 55·87 in 1910–11. Of 6,289 persons arrested, 620 were released without trial for want of evidence, 4 died, 544 were released on account of complainants withdrawing the charges, 5,077 were committed for trial, and 44 remained under enquiry at the close of the year. Of the persons committed, 2,437 were convicted, 1,938 were acquitted, 227 were released on withdrawal of charges, 6 died, 6 escaped and 463 remained undisposed of at the end of the year.

The most important enactment of the year was the Press Act, drafted on the lines of a similar Act in force in British India, to enable the Durbar to deal effectively with seditious and scurrilous literature. This Act was followed by the introduction of press rules. A Children's Court Act was also passed providing facilities for the trial of children charged with criminal offences. The Act provides for reformatories under the Educational Department, prohibits the sale of liquor or tobacco to children, and forbids the employment of a child under 12 years of age in any factory or dangerous trade. The system of dealing with suits up to the value of Rs. 100 by

conciliators is said to work well. In districts where conciliators are appointed, no court may entertain a civil suit without the conciliator's certificate. In these courts no fees are charged, and the certificate is not granted until the conciliator has failed to arrange an amicable settlement between the parties.

The rules relating to the tenure of land held by Waghers were revised, and sanction was conveyed to the purchase by the Durbar of lands of guaranteed Girassias under certain conditions.

His Highness the Maharaja left for Europe on the 22nd April 1911 and returned to India on the 12th November 1911.

**Central India.**—The year was generally prosperous throughout Central India. The monsoon was well distributed except in the Narbada Valley, and there sufficient rain fell in November.

Deaths from plague numbered 5,282, as against 6,083 in 1911–12. Otherwise the year was not as healthy as the preceding one. Cholera claimed 4,782 victims in the territories of Indore, and 1,573 in Bhopal: small-pox was rife in the later months, and the number of patients treated in hospital under all heads increased by 71,331 to 1,722,193. Of 220 hospitals and dispensaries maintained during the year three were new institutions.

With the exception of three cases of poisoning the criminal returns were normal. The number of dakaities was the same as in the previous year, viz., 74, and the majority were unimportant; but it was considered advisable to retain small detachments of the Malwa Bhil Corps in the Bhil Tracts of the Bhopawar Agency. Progress was made with the settlement of criminal tribes.

In July 1912, the police of the various administered areas in Central India and the local branch of the Thagi and Dakaiti Department were amalgamated and organized as the Central India Agency Police Force. The force is subject to the provisions of the Indian Police Acts of 1861 and 1888, and is enrolled, graded, and paid uniformly with other provincial police.

The Malwa Bhil Corps was also re-organised during the year.

The total outlay on Imperial public works amounted to £43,000. The chief works undertaken were the new residency at Gwalior and lines for the Malwa Bhil Corps. The department maintained 755¼ miles of road, as in the previous year.

Opium continued to be the chief feature of trade. For opium certified for China the price per chest in the Bombay market ruled from £290 to £346 during April and May 1912 and continued as high as £306 till October, in spite of difficulties having begun to arise in the disposal of stocks in that country. By November the accumulations of opium in the treaty ports were such that the market price in Bombay fell to £220 in November and £166 in December and the prices bid for the right of export were correspondingly affected. To meet the situation the Government of India restricted shipments by fixing an upset price of £166 per chest for the right of export at the auctions held from January to March, after which the auctions were suspended. As this meant that only 2,760 chests of Malwa opium from the auctions of the previous November and December would be shipped to China during the calendar year 1913, instead of 13,820 chests as previously notified, the price per chest in Bombay rose to £206 in January and stood at from £240 to £253 during February and March. In all 9,968 chests were sent out of Malwa for China during the year, on which Government realised £1,520,000 for the right of export, in addition to the pass duty of £80 per chest; and of this sum the share assigned to the States of Central India amounted to £671,000. As the result of these exports and of provincial exports amounting to 415 chests, and allowing 6,480 chests as the output of the previous year's crop and deducting 3,000 chests as the local consumption during the year, the stock of opium in Malwa is estimated to have fallen to between 38,100 and 43,100 chests by the end of March 1913. The area under poppy cultivation in Central India declined from 47,240 acres in 1911–12 to 22,016 in the year under report, of which the outturn (in 1913–14) is reckoned at 5,400 chests.

Excise administration made satisfactory progress, as evidenced by (*a*) the adoption of the Madras system by the States of Dhar, Jhabua, and Datia, and its extension to certain outlying portions of the Indore State, (*b*) the replacement of farms and out-stills in Bhopal and Orchha by the minimum guarantee system with substantial rates of duty, (*c*) the enhancement of duties levied on hemp drugs by states on the west of the Gwalior-Bhopal section of the Great Indian Peninsula Railway, (*d*) the prohibition or restriction of opium cultivation by almost every State in Malwa, and (*e*) the adoption

by Rajgarh, Narsinghgarh, and Khilchipur of measures for controlling supplies of opium and taxing local consumption.

The new buildings of the Daly College were formally opened by His Excellency the Viceroy in November 1912. There were 70 students at the close of the year.

A scheme was drawn up and submitted to the Government of India for the improvement of education in the administered areas in Central India.

The administrative system of the Gwalior Darbar was further developed during the year by the appointment of members to the charge of the Political, Judicial, Army, Finance, Commerce, and Home Departments. State Councils were established in both the Dewas States.

**Rajputana.**—The information available is partly for 1911–12 and partly for 1912–13, and the States have been grouped accordingly.

**1911–12 (General).**—The rainfall for 1911 was irregular and unevenly distributed. In most places there was a marked shrinkage in the cultivated area. Prices ruled high. Relief works were opened in Dungarpur, but the maximum number of workers employed on any one day did not exceed 400. No increase in serious crime was reported in any of the States. Cattle disease was prevalent in Banswara, Dungarpur and particularly in Tonk, where heavy losses occurred from small-pox. There was no dearth of fodder or water.

Plague broke out in epidemic form in the Jaipur State, 4,114 attacks and 3,999 deaths being recorded. Inoculation seemed to find more favour than during any previous year among the poor and middle-class people, and 1,277 inoculations were performed. There were also some cases of cholera in Jaipur. For the rest, public health was generally satisfactory.

Education received considerable attention in Jodhpur. The services of a British officer were lent to inspect and advise on the working of the Primary Schools of the State, and another British officer was appointed to direct the education of the sons of the Rajput nobles and subjects of the State. The construction of a new school building on model lines suitable for 500 Rajput boarders, at a cost of about two lakhs, was sanctioned and commenced.

One Hindi school was added to the nine public schools in Dungarpur. The number of State schools in Jaipur was increased from 1,130 to 1,215, in Kishangarh from 22 to 23, and in Bharatpur from 117 to 119 in the year under report.

*Marwar.*—The young Maharaja of Jodhpur, who succeeded his father in March 1911, was throughout 1911–12 in England, with the exception of about seven weeks, when he returned to India for the Delhi Coronation Darbar. While in England he was at school at Wellington College. The administration was conducted by a Council under the presidency of His Highness Maharaja Sir Partab Singh, the great-uncle of the Maharaja.

The construction of a railway line from Jodhpur to Phalodi as a feeder line was in progress.

*Sirohi.*—Revenue Settlement operations were in progress in Sirohi, and the conclusion was reached that, having regard to the primitive condition of the population, the time was not ripe for the general introduction of cash assessments. In one district, however, it has been decided, as an experimental measure, to carry out a soil classification and assessment.

*Jaipur.*—In Jaipur the field work of the Jaipur-Shekhawati Railway line has already been carried 105½ miles northwards up to Ramgarh on the Bikaner border.

During the visit of the Viceroy to Jaipur in November 1912 the King Edward Memorial Hall was opened by His Excellency.

A cottage ward for females was added to the Mayo Hospital and was opened by Lady Hardinge.

*Tonk.*—A flour-mill worked by an oil-engine was opened in Nimbahera. A composite factory containing gins, oil-presser, and flour-mills worked by a steam engine was also opened in Sironj.

**1912–13 (General).**—The harvests were on the whole good. The year was one of unprecedented prosperity in Kotah from a financial point of view. There were no complaints as regards public health, except for an outbreak of indigenous cholera at Udaipur.

**(Native States.)**

Prices were still high in Mewar, but comparatively easier than in the previous year. They were normal in Bundi, though labour was scarce, and is getting more so day by day. Generally speaking, the people were prosperous.

Three new post offices were opened in Mewar and one telegraph office in the Aligarh Pargana of the Tonk State.

*Mewar.*—A metalled road from Udaipur to the Jaisamand lake was under construction. New lines for the Imperial Service Squadron of cavalry recently presented by His Highness the Maharana were nearly completed.

*Alwar.*—In Alwar the dam of the large irrigation lake known as Jey-Samand was completed and the construction of irrigating channels was to be taken in hand. His Highness the Maharaja was absent for six months on a visit to Europe.

*Dholpur.*—His Highness the Maharaj Rana of Dholpur returned from a visit to England and took over charge of certain departments in order to gain practical administrative experience before his investiture with full ruling powers.

The Bari-Baseri Section of the Dholpur-Bari-Light Railway, distance 9·05 miles, was opened to traffic.

*Bundi.*—The Bundi Darbar opened a ginning factory at the capital. They granted a lease for 30 years to Messrs. Killick Nixon & Co., of Bombay, for the manufacture of cement and lime from the quarries at Lakheri, and the Company has established itself under the name of "the Bundi Hydraulic Lime and Cement Co., Ltd." with a registered office at Bombay. The cement and lime produced are reported to be of the best quality.

*Jhalawar.*—His Highness the Raj Rana of Jhalawar returned to his State after an absence of about nine months spent in England. This was His Highness's second visit to Europe.

There was a re-assessment of land revenue in Jhalawar, where gradual recovery from the great famine of 1900–01 shows itself in an annual extension of the area under cultivation.

**Bengal.**—The Cooch Behar State enjoyed a generally prosperous year, but the public health was affected by an outbreak of cholera, causing more than 2,000 deaths. the tobacco crop showed a considerable decrease, but the jute market continued brisk, and the prices of agricultural produce were high. The State's interest in education was maintained and the expenditure rose. The Legislative Council did not meet, but the State Council held meetings as usual, both for judicial and executive purposes.

The Maharaja, who succeeded his father in 1911, died at Cromer in September 1913.

In the Chota Nagpur States of Kharsawan and Seraikela the year, from an agricultural point of view, was a good one. The public health was satisfactory. The Chief of Kharsawan was installed in the course of the year. The scheme for the preservation of his State forests was in operation, and the reorganisation of the police was considered.

The record of the Tributary and Feudatory States of Orissa was one of all-round improvement. The land revenue and forest administrations continued to show progress. There was an increased outlay on roads, buildings and drainage works. The progress of vaccination was excellent; nine female vaccinators were employed. Education showed some advance, and increased attention was paid to Pans and other low castes. A marked increase of police efficiency was recorded in several of the more important States. Nine States were under Government administration at the close of the year, two of them, Narsingpur and Baud, being added to the list in consequence of the death of their chiefs. The Raja of Hindol attained his majority and assumed control of his State.

**Assam.**—*Manipur.*—In the south-west districts the agricultural classes suffered from the continuance of a plague of rats, which destroyed the rice and maize and most of the millet. There were also losses of cattle due to rinderpest. The increased expenditure of the State was partly attributable to the scarcity of rice.

Considerable disturbance resulted, late in the year, from a general movement against the prevalent system of employing village labour for various works of public utility. The system was subsequently abolished. School buildings, hitherto kept in repair by the villagers, will now be maintained at State expense. The silk venture of the

Manipur Co., Ltd., not proving successful, the Darbar took over the establishment with the intention of continuing the experiment for a year or two.

The conduct of the hill tribes was generally satisfactory.

**Hill Tippera.**—The prosperity of the State was indicated by the year's income, the highest yet recorded. Unseasonable rains and the depredations of rats reduced the output of cotton and linseed, which were nevertheless above the average. The experiments in sericulture continued, and rubber cultivation was taken up, in both cases with encouraging results. Education is somewhat backward, but there was a slight increase in school attendance, and special efforts were made on behalf of the hillmen.

**United Provinces of Agra and Oudh.**—The report of the Rampur State is for the year 1911–12. Owing to timely and adequate rains, no relief measures were necessary such as were undertaken in the previous year. The development of the sugar industry continued, and the number of boiling plants increased from 17 in 1910–11 to 27. The death-rate fell from 29·9 to 16·7 per thousand, but over 600 deaths resulted from plague, which prevailed for 6 months of the year. The preventive measures adopted included inoculation and rat killing. Education showed progress. Free education is provided by the State, and scholarships tenable both at school and college are awarded.

The report of the Benares State is also for 1911–12. The year was marked by various reforms. In the interests of the agricultural classes occupancy rights were granted to tenants and, with a view to securing stability of rental, a revision of rents was provided for at intervals of 20 years. Agricultural banks were also established, from which advances are made at from 4½ to 6 per cent. New dispensaries and schools were opened. The number of scholars in various schools increased from 2,600 to over 4,000. The population of the jungle tracts showed an unexpected appreciation of the educational facilities afforded. In most of the schools education was free. Some checks were placed on the system of forced labour, with a view to the correction of abuses.

The condition of the Tehri State during 1912–13 was generally satisfactory. The public health was good. The forest revenue, the chief source of the State's income, showed an increase. Forest settlement operations were in progress during the year. The State is taking steps to meet a growing demand for primary schools. The Raja, Sir Kirti Sah Bahadur, K.C.S.I., died in April 1913. The succession of his son, a minor, has been recognised by Government.

**Punjab Native States.**—The reports from the various States were generally satisfactory, as regards public health, revenue and agriculture.

In Bahawalpur some progress was made in education, which has hitherto been in a backward state. The primary schools of Patiala increased by 20 to a total of 209, 39 of these being girls' schools. Education also received attention in Jind.

The boundary between the Bahawalpur State and Sind, regarding which some friction had existed, was settled by a Commission appointed by the Government of India.

A son and heir was born to the Maharaja of Patiala in January 1913. The Chief of Nabha was installed by the Political Agent in December 1912, and shortly after the close of the year Mian Jogindar Sen, a minor, was installed as Raja of Mandi. In recognition of the able administration of the small State of Dhami, the Order of C.I.E. was bestowed on the Rana. The young Nawab of Bahawalpur proceeded to England for educational purposes at the close of the year. The Maharaja of Kapurthala was absent in Europe during the summer of 1912.

**Central Provinces.**—The report is for the calendar year 1912. The general condition of the States and people was satisfactory and there was no scarcity. In most States the public health was good, the outbreaks of cholera and malaria reported in two or three cases not being serious or widespread. A few States suffered from cattle disease. The rainfall was deficient in some States, and ill-distributed in others. In Bastar, which retained the services of two British officers as Diwan and Assistant Diwan, the revenue increased, chiefly under the heads of land revenue, forests and excise, while there was an increase of expenditure, mainly upon jails, police, education, and public works. The question of forest preservation is being reconsidered. In

**(Native States.)**

Kanker the revised settlement of 1909 continued to prove beneficial. The young Chief of Nandgaon died in May 1912, and no successor was appointed during the year.

**Bombay.**—The year was marked by a welcome return of good agricultural conditions after a season of poor crops in almost all the States, and scarcity or famine in Kathiawar, Cutch, and North Gujarat. In these parts famine relief had to be continued up to the burst of the monsoon, which, fortunately, was timely. Crops were uniformly very fair or good except in Akalkot, Jath, and Daphlapur among the Satara Jaghirs, and in Kolhapur, where heavy rains in July and August resulted in floods which caused considerable damage, both to the kharif and rabi crops. But in all these States the demand for labour was so well maintained that the poorer classes came to no harm. In the State of Khairpur, in Sind, the area under cultivation showed a large advance owing to a favourable inundation. Generally speaking, as in the British districts, the continued demand for labour kept wages high, but prices showed a tendency to drop when the success of the monsoon was assured.

In contrast to the renewed agricultural prosperity, public health experienced a serious relapse. Although plague showed a remarkable decrease, cholera, small-pox, and malaria, following on a season that must have sapped to some extent the stamina of the population, caused much illness and serious mortality, while the number of births also fell heavily. In some States, indeed, the registered deaths outnumbered the births.

The effects of famine were also noticeable in the trade statistics of the States of Cutch and Kathiawar. There is no reason, however, for believing that the falling off is anything more than temporary. The revenues of the States naturally showed a tendency to advance and the expenditure to fall with the disappearance of famine conditions.

Education did not show any remarkable advance, and the criminal statistics were on the whole less satisfactory.

During the year a son and heir was born to His Highness the Maharaja of Bhaunagar. The Nawab of Savanur and the Chief of Jasdan were installed. The title of K.C.I.E. was conferred on the Chief of Jamkhandi, and the Order of C.I.E. on Vala Shri Laxman Meram of Thana Devli.

**Madras.**—The following information is for the year to 15th August 1912 in the case of the States of Travancore and Cochin, in other cases for the year to 30th June 1913.

In Travancore, though the season was favourable, wages and the price of food grains rose. The total value of exports and imports exceeded by nearly £130,000 that of the previous year. A sum of £184,000 was spent upon public works, and of this nearly £20,000 were devoted to the extension of the Kodayar irrigation project. The revenue of the State was £918,000, the expenditure £900,000. The Durbar's balance now stands at £505,000. Expenditure on education increased by over £10,000. The number of schools rose by 50 to 1,698, and of pupils by 19,000 to 178,000.

In the Cochin State, despite a large increase in expenditure, for the first time for over a decade the net balance was in favour of the State. Further advance was made in the Agricultural Department, but forest revenue showed a marked decrease. There was an increase in the number of serious crimes, while the percentage of convictions decreased. The strict enforcement of the rules of the Educational Code led to a reduction in the number of aided and unaided schools and to an increase of State schools. Considerable attention was paid to female education. The expenditure on public instruction was increased.

The revenues of the Pudukkottai State continued to rise. The season, though below the average, was more favourable than in the previous year. The condition of the agricultural classes was fairly good, the high prices obtained for the produce compensating to a certain extent for the reduced outturn. During the year six Regulations were passed, including a Land Acquisition Regulation and a Forest Regulation. The slight decrease in civil litigation observed in 1911–12 continued, and reported crimes were also less numerous. As regards the detection of grave crime, the results were still unsatisfactory. The public health was good. The town hospital and the State dispensaries did useful work. Village sanitation and vaccination received attention. Education made fair progress. His Highness the Raja returned to the State in November 1912, and left again for Europe in March 1913.

The Banganapalle State was administered by the Nawab throughout the year. Though the season opened unfavourably, timely rain in the autumn changed the year into one of prosperity. The balance at the close of the year was the highest attained for five years. There was a fall both in the birth and the death rates. Two schools for girls were opened, and there was a general increase in attendance. The administration of the municipality was satisfactory.

In the Sandur State the year was a fair one. Wages showed a tendency to rise, particularly at harvest time. The public health was good. There was no epidemic, though malaria was prevalent, as usual. Education continued to be backward, and the total number of pupils showed a decrease. During the year the Raja was receiving training in the work of administration.

# APPENDIX.

## LIST OF INDIAN OFFICIAL REPORTS, &c.

(MOSTLY ANNUAL.)

*General.*

Statistical Abstract relating to British India (Parliamentary Paper).
Statistics of British India:—
- Part I.—Industrial (Factories, Mills, Mines, &c.).
- Part II.—Commercial (Foreign Trade and Shipping, &c.).
- Part III.—Commercial Services (Post Office, Railways, Telegraphs, &c.).
- Part IV.(*a*)—Finance and Revenue (Paper Currency, Coinage, Public Debt, &c.).
- Part IV.(*b*)—Finance and Revenue (Principal Heads of Revenue, Salt, Opium, &c.).
- Part V.—Area, Population, and Public Health (Area, Population, Emigration, Births and Deaths, Vaccination, &c.).
- Part VI.—Administrative and Judicial (Administrative Divisions, Civil and Criminal Justice, Registration, Police, Jails, &c.).
- Part VII.—Educational (Education, Printing Presses, and Publications).
- Part VIII.—Local Funds (Municipalities, Local Boards, and Port Trusts).

Census Reports (Decennial), India and Provincial.
Administration Reports: Madras, Bombay, Coorg, United Provinces, Punjab, Bengal, Central Provinces and Berar, Burma, Bihar and Orissa, Assam, Andaman and Nicobar Islands, Civil and Military Station of Bangalore, Ajmer-Merwara, Baluchistan, North-West Frontier Province.

*Justice and Police.*

Report on the Administration of Civil Justice for each Province.
Report on the Administration of Criminal Justice for each Province.
Report on Jails for each Province.
Reports on Police for each Province, and for Bombay Town and Island, Calcutta, and Rangoon.

*Finance.*

Finance and Revenue Accounts of the Government of India.
East India Financial Statement (Parliamentary Paper).
Return of Net Income and Expenditure for eleven years (Parliamentary Paper).
Accounts and Estimates: Explanatory Memorandum (Parliamentary Paper).
Home Accounts (Parliamentary Paper).
Estimate of Revenue and Expenditure (Parliamentary Paper).
Loans raised in England (Half-yearly Parliamentary Paper).
Loans raised in India (Half-yearly Parliamentary Paper).
Mint Reports for Calcutta and Bombay.
Paper Currency Department Report.
Statistics compiled from the Finance and Revenue Accounts.

*Land Revenue, &c.*

Land Revenue Administration Provincial Reports for Lower Provinces (Bengal), Bihar and Orissa, Assam, United Provinces, Bombay Presidency (including Sind), Punjab, Central Provinces and Berar, Burma, and Madras.
Report on Land Revenue Administration, Land Records, Settlement Operations, Alienation of Land Act, &c. for North-West Frontier Province.
Madras Survey, Settlement and Land Records Department Report.
Reports of Land Records Departments for Bombay, Burma, Bengal, United Provinces, and Punjab.
Report on Settlement Operations, Punjab.
Reports on Survey and Settlement Operations, Bengal and Assam.
Reports on Operations of the Land Records and Settlement Departments, Central Provinces and Berar.
Report of the Talukdari Settlement Officer, Bombay.
Provincial Reports on the Administration of Estates under the Court of Wards.
Report on the Punjab Canal Colonies.

*Separate Revenue (Salt, Excise, &c.).*

Salt Department Reports: Northern India, Madras, Bombay, Sind, Bengal, Burma, Bihar and Orissa.
Excise Report for each Province.
Opium Department Reports: United Provinces and Bombay.
Stamp Department Report for each Province.
Registration Department Report for each Province.
Income Tax Report for each Province.

*Agriculture and Veterinary.*

Report on the Progress of Agriculture in India.
Report of the Agricultural Research Institute and College, Pusa.
Bulletins of the Agricultural Research Institute, Pusa, and of the Provincial Departments of Agriculture.
Memoirs of the Department of Agriculture.
Proceedings of the Board of Agriculture.
Agricultural Journal of India (quarterly).
Report of the Department of Agriculture in each Province.
Reports on various Agricultural Stations, Experimental Farms, and Botanic Gardens.
Season and Crop Report for each Province.
Agricultural Statistics of India.
Area and Yield of certain Principal Crops.
Report on Production of Tea in India.
Report on Tea Culture in Assam.
Statistics compiled from the Reports of the Provincial Civil Veterinary Departments.
Report of the Camel Specialist.
Report of the Imperial Bacteriologist (Veterinary).
Reports of the Civil Veterinary Departments for Madras, Bombay, United Provinces, Punjab, Bengal, Burma, Assam, North-West Frontier Province, and Bihar and Orissa.

*Co-operative Societies.*

Statements showing Progress of the Co-operative Movement in India.
Report on Co-operative Credit Societies for each Province.
Reports of Conferences of Registrars of Co-operative Credit Societies, India and Provincial.

*Forests.*

Review of Forest Administration in British India.
Report on Forest Administration for each Province.
Reports of the Forest Research Institute and the Imperial Forest College, Dehra Dun.
Indian Forest Memoirs.
Indian Forest Records.
Forest Bulletins.

*Mineral Production and Mines.*

Review of Mineral Production (in Records of Geological Survey).
Report on Production of Coal in India.
Report of the Chief Inspector of Mines.

*Trade and Manufactures.*

Annual Statements of Sea-borne Trade and Navigation, India and Provincial (Madras, Bombay, Sind, Bengal, Burma).
Review of the Trade of India (Parliamentary Paper).
Tables of the Trade of India (Parliamentary Paper).
Provincial Reports on Maritime Trade and Customs (including working of Merchandise Marks Act) for Bengal, Bihar and Orissa, Bombay, Sind, Madras, and Burma.
Accounts of Sea-borne Trade (monthly and for Calendar Year).
Accounts of Land Trade (monthly).
Annual Statement of Coasting Trade of British India.
Report on the Trade and Navigation of Aden.
Accounts of Trade carried by Rail and River in India.
Report on Inland, Rail-borne, or Rail-and-River-borne Trade for each Province.
External Land Trade Reports for Bengal, Bihar and Orissa, Assam, Burma, United Provinces, Punjab, North-West Frontier Province, Sind, and British Baluchistan.
Indian Trade Journal (weekly).
List of Joint-Stock Companies in British India and Mysore.
Reports on the working of the Indian Companies Act (Provincial).
Report on the working of the Indian Factories Act for each Province.
Report of the Chief Inspector of Explosives.

*Public Works.*

Administration Report on Railways (Parliamentary Paper).
Railways and Irrigation Works. Return of Capital Expenditure, &c. (Parliamentary Paper).
Provincial Reports on Public Works (Buildings and Roads).
Report on Financial Results of Irrigation Operations.
Report on Irrigation Revenue for each Province.
Reports of Madras and Bombay Irrigation Departments.
Annual Report on Architectural Work.

*Post Office and Telegraphs.*

Post Office Report.
Report of Indian Telegraph Department.
Report of Indo-European Telegraph Department.

*Scientific Departments.*

Report of the Operations of the Survey of India.
Records of the Survey of India.
Records and Memoirs of the Geological Survey of India.
Report of the Indian Meteorological Department.
Indian Weather Review, Annual Summary.
Rainfall of India.
Memoirs of the Indian Meteorological Department.
Report of the Meteorologist, Calcutta.
Report of the Director-General of Observatories.
Memoirs and Bulletins of the Kodaikanal Observatory.
Report of the Board of Scientific Advice.
Report of the Archæological Survey of India, and Provincial Reports.
Report and Records of the Botanical Survey.

*Education, Literature, and the Press.*

Education Report for each Province.
Quinquennial Review of Education (Parliamentary Paper).

*Local Self-Government.*

Reports on Municipalities for each Province and for Calcutta, Bombay City, Madras City, and Rangoon.
Report on District and Local Boards or Local Funds for each Province.
Reports of Port Trusts of Calcutta, Bombay, Madras, Rangoon, Karachi, and Aden.

*Medical, Sanitary, and Vital Statistics.*

Report of the Sanitary Commissioner with the Government of India.
Report on Sanitary Measures in India (Parliamentary Paper).
Report of the Sanitary Commissioner for each Province.
Vaccination Report for each Province.
Report on Civil Hospitals and Dispensaries for each Province.
Report on Lunatic Asylums for each Province.
Report of the Chemical Examiner and Bacteriologist for each Province.
Scientific Memoirs by Officers of the Medical and Sanitary Departments.
Reports of the All-India Sanitary Conferences.
Reports of the Imperial Malaria Conferences.
Indian Journal of Medical Research (Quarterly).

*Emigration and Immigration.*

Calcutta Port Emigration Report.
Bengal Inland Emigration Report.
Assam Immigration Report.

*Prices and Wages.*

Prices and Wages in India.
Variations in Indian Price Levels.
Reports of Provincial Wage Censuses.

Digitized with financial assistance from

Government of Maharashtra

on 01 February, 2020